ARTICLES

A Canary in a Coal Mine: What We Haven't Learned from *Deepwater Horizon* and How Courts Can Help

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INTRODUCTION

"Could this oil spill have been worse? Yes. Could there be an oil spill in the future that is worse than this one? Unfortunately, the answer to that question is also yes."

Judge Carl Barbier

*In re Oil Spill by the Oil Rig "*Deepwater Horizon*" in the Gulf of Mexico, on Apr. 20, 2010*[1]

This Article aims to remind courts presiding over oil spill cases that Congress enacted Section 311 of the Clean Water Act with the goal of zero pollution in mind.[2] Whether purposivist,[3] textualist[4] or something in between, the Act provides punitive tools so courts can protect our nation's waters and deter carelessness in the offshore industry before another disaster like the *Deepwater Horizon* oil spill ("*Deepwater*") spoils our shores. Persistent oil pollution supports this conclusion, and although this Article uses the 2010 *Deepwater* oil spill to illustrate our current regulatory landscape, smaller spills occur daily in the United States and dangerous drilling practices continue to threaten another large scale disaster.

The *Deepwater* oil spill was the worst environmental disaster in the history of the United States. For eighty-seven days in 2010, "thousands of barrels of oil and gas from the MC252 reservoir flowed into and up the Macondo Well . . . and into the Gulf of Mexico."[5] In the end, BP and its codefendants were responsible for

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1. In re Oil Spill by the Oil Rig "Deepwater Horizon" in the Gulf of Mexico, on Apr. 20, 2010, 148 F. Supp. 3d 563, 570 (E.D. La. 2015) [hereinafter Deepwater Penalty Ruling].

2. When courts interpret federal statutes, they endeavor to do so as faithful agents of Congress. This is appropriate: members of Congress are elected, and federal judges are not. *See generally* WILLIAM N. ESKRIDGE, JR., PHILLIP P. FRICKEY & ELIZABETH GARRETT, LEGISLATION AND STATUTORY INTERPRETATION (2d ed. 2006); John F. Manning, *Textualism and the Equity of the Statute*, 101 COLUM. L. REV. 5 (2001) ("[I]t is widely assumed that federal judges must act as Congress' faithful agents."). *But see* Jonathan T. Molot, *Reexamining Marbury in the Administrative State: A Structural and Institutional Defense of Judicial Power over Statutory Interpretation*, 96 NW. U. L. REV. 1239, 1253–54 (independent judgment rather than rote obedience to legislative instructions); Jerry Mashaw, *As if Republican Interpretation*, 97 YALE L.J. 1685, 1692 ("[t]he judge as monitor or creative lawgiver . . . is not sharply distinguishable from the judge as faithful agent of the legislature.").

3. Purposivists consider statutory language, legislative history, policy and other reliable sources. ROBERT A. KATZMANN, JUDGING STATUTES 36 (2014). While purposivist courts may look outside the text, they endeavor to identify Congress' objective intent and "achieve consistency of solution." HENRY M. HART, JR. & ALBERT M. SACKS, THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW 119 (William N. Eskridge, Jr. & Phillip P. Frickey eds., 1994).

4. Strict textualists look only at statutory text and only give meaning to identifiable objective statutory purpose that is clear from the text. Antonin Scalia & Bryan A. Garner, *Reading Law: The Interpretation of Legal Texts* 33 (2012). Textualists may acknowledge external proof of statutory purpose but, if those sources contradict a text's plain meaning, the text will win out. Jonathan T. Molot, *The Rise and Fall of Textualism*, 106 COLUM. L. REV. 1, 69.

5. *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 566.

the largest oil spill in U.S. history:[6] Fifty miles from Louisiana's coast and a mile below the surface,[7] at least 4 million barrels (168 million gallons) were discharged.[8] Eleven men died and seventeen were seriously injured from the explosions and fires aboard the rig.[9] As many as 90,000 people from ninety different organizations mobilized for the spill response, which cost approximately $14 billion.[10] Many responders reported acute and long-term health effects from exposure to oil and chemicals used in the response.[11] Over 3,000 spill-related cases, including more than 100,000 claimants, have been filed since 2010.[12] As Judge Carl Barbier, who presided over cases arising from the spill, explained: "the seriousness of [the *Deepwater* spill] cannot be overstated. The oil spill was extremely serious. It was gravely serious. It was a massive and severe tragedy."[13]

Yet, in the years since *Deepwater*, oil spills continue to be a major source of water pollution,[14] posing pervasive and ongoing threats to the environment and

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6. Largest Oil Spills Affecting U.S. Waters Since 1969, *NAT'L OCEANIC & ATMOSPHERIC ADMIN. OFF. OF RESPONSE & RESTORATION*, https://perma.cc/5WM6-VH5L (last visited Feb. 14, 2020).

7. Carl Safina, *The 2010 Gulf of Mexico Oil Well Blowout: A Little Hindsight*, 9 PLOS BIOLOGY 1, 1, 4 (2011), e1001049 (explaining that the distance from the surface of the Gulf of Mexico to the sea floor was one mile and the distance from the seafloor to the bottom of the well was just over 4 km (about 2.5 mi)).

8. *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 568 (finding that 4 million barrels were discharged and 3.19 entered the Gulf). *But see* Igal Berenshtein, Claire Paris, Natalie Perlin, Matthew Alloy, Samantha Joye, & Steve Murawski, *Invisible Oil Beyond the* Deepwater Horizon *Satellite Footprint*, 6 SCIENCE ADVANCES 1, 1–2 (2020) (concluding that the total may be 30 percent more than what was listed in the court's ruling).

9. *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 565.

10. *Id*. at 568; *Deepwater Horizon: Response in the Midst of an Historic Crisis*, NAT'L OCEANIC & ATMOSPHERIC ADMIN. OFF. OF RESPONSE & RESTORATION, https://perma.cc/25UZ-Y4RZ (last visited Feb. 14, 2020).

11. Jennifer Rusiecki, Melannie Alexander, Erica Schwartz, Li Wang, Laura Weems, John Barrett, Kate Christenbury, David Johndrow, Renée Funk, & Lawrence Engel, *The Deepwater Horizon Oil Spill Coast Guard Cohort Study*, 75 JOURNAL OF OCCUPATIONAL & ENVTL MED. 165, 165 (2018) (finding "positive associations between crude oil exposure and various acute physical symptoms among responders, as well as longer term health effects" with over 50 percent of 53,519 responders surveyed reporting exposure to oil); Sara Sneath, *8 Years After BP Oil Spill, Thousands of Medical Claims Still not Paid*, THE TIMES-PICAYUNE (Apr. 20, 2018, 1:18 PM), https://www.nola.com/news/environment/article_50997394-26d7-50c2-9a64-1a7d1eec1d45.html.

12. *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 566.

13. *Id*. at 570.

14. *See, e.g.*, Emily Cassidy, *There Were 137 Oil Spills In The Us In 2018. See Where They Happened*, RESOURCE WATCH: BLOG (FEB. 7, 2019), https://perma.cc/HXN5-KTDP; *see also* BUREAU OF OCEAN ENERGY MGMT., 2016 UPDATE OF OCCURRENCE RATES FOR OFFSHORE OIL SPILLS 76, (2016), https://perma.cc/ZJ66-96FZ [hereinafter BOEM 2016 UPDATE] (reporting 725 spills on the Outer Continental Shelf between 2001 and 2015 from platforms and pipelines); *Offshore Incident Statistics*, BUREAU OF SAFETY & ENVTL. ENFORCEMENT, https://perma.cc/Q3WJ-TLHR (last visited Oct. 26, 2020) (reporting 383 small spills of oil, drilling mud, and other chemicals from drilling platforms from 2007–2015); J. M. Weber & R. E. Crew, Jr., *Deterrence Theory and Marine Oil Spills: Do Coast Guard Civil Penalties Deter Pollution?* 58 J. OF ENVTL. MGMT. 161, 161 (2000) doi:10.1006/jema.1999.0326 ("The long-term impacts of [small] spills can have huge consequence for marine ecosystems."); Indeed, even "safe" deepwater drilling practices have negative environmental impacts due to small but pervasive discharges of oil and other toxic chemicals. *See* Oistein Johansen, Henrik Rye & Cortis Cooper, *Deep Spill–Field Study of a Simulated Oil and Gas Blowout in Deep Water*, 8 SPILL SCI. & TECH. BULL. 433,

human health.[15] Regulatory changes intended to address drilling safety were promulgated[16] and rolled back.[17] With a major increase of deepwater drilling on the horizon,[18] no consistent regulatory framework to combat accidents[19] and no end to partisan bickering in sight,[20] courts must instead rely on the text of the Clean Water Act to curb future spills.

Congress has a longstanding policy that there be "no discharges of oil" in U.S. waters.[21] History of water pollution regulations, the text of the Act, legislative history and other commonly used sources all support this conclusion. This Article explores how courts can be faithful[22] to Congress' zero-spill policy[23] based on a variety of interpretive methods. Part I examines the post-*Deepwater* landscape, including regulatory failures and the persistence of oil pollution. Part II explores the evolution of U.S. oil pollution laws and tracks the increasingly punitive nature of Section 311 of the Clean Water Act. Parts III and IV respectively discuss the Act's strict liability standard and penalty scheme, and provide examples of how courts can best apply Section 311 to deter oil spills and the offshore industry in particular.

433–34 (2003) doi:10.1016/S1353-2561(02)00123-8 (explaining that normal deepwater drilling practices result in small but pervasive discharges of oil and other toxic chemicals).

15. COMM. ON OIL & THE SEA: INPUTS, FATES, & EFFECTS, OCEAN STUD. BOARD & MARINE BOARD, NAT'L RESEARCH COUNCIL OF THE NAT'L ACADS, OIL IN THE SEA III: INPUTS, FATES, AND EFFECTS 120 (Nat'l Acads Press 2003) [hereinafter *OIL IN THE SEA*]; Rusiecki, et al., *supra* note 11 at 3.

16. 30 C.F.R. Part 250 (2016).

17. 30 C.F.R. Part 250 (2019); *see also* Nadja Popovich, Livia Albeck-Ripka & Kendra Pierre-Louis, *95 Environmental Rules Being Rolled Back Under Trump*, NY TIMES (Dec. 21, 2019), https://perma.cc/NVV6-YT2J.

18. Merrit Kennedy, *Trump Administration Opens Door to Dramatic Expansion of Offshore Energy Leases*, NAT'L PUB. RADIO (Jan. 4, 2018, 2:27 PM), https://perma.cc/R9EG-YFD2; *but see* Coral Davenport, *Interior Dept. Delays Its Plan to Open U.S. Coastline to Drilling*, NY TIMES (Apr. 25, 2019) https://perma.cc/V8MQ-RTQG. Commentators believe President Trump will renew this effort after the 2020 Presidential election. *See* Ben Lefebvre & Eric Wolff, *Trump erases offshore drilling rules enacted after BP oil spill*, POLITICO (May 2, 2019, 2:38 PM) https://perma.cc/9NM9-7QT7.

19. *See* Christopher M. Hannan, *"Lost in Their Own Streets" and at Sea: The New Regulatory Reality After Macondo*, 92 TUL. L. REV. 991, 1003 (2018).

20. Safina, *supra* note 7 at 4 ("The main value that might have come of the Deepwater Horizon blowout would have been in creating game-changing momentum toward a new energy path. But the country's current political polarity and a bitterly partisan Congress helped prevent that from happening."); Brian Kennedy & Cary Funk, *Democrats and Republicans differ over role and value of scientists in policy debates*, PEW RESEARCH CENTER: FACTTANK (Aug. 9, 2019), https://perma.cc/MV8T-3SXZ.

21. 33 U.S.C. § 1321(b)(1) ("it is the policy of the United States that there should be *no discharges of oil* or hazardous substances into or upon the navigable waters of the United States.") (emphasis added).

22. Frank H. Easterbrook, *Text, History, and Structure in Statutory Interpretation*, 17 HARV. J. L. & PUB. POL'Y 61, 63 (1994) ("We are supposed to be faithful agents, not independent principals.").

23. *See* 33 U.S.C. § 1321(b)(1).

I. RISKS & REGULATORY FAILURES

The *Deepwater* spill did not cause the lasting change that some expected. Although the spill created a flurry of scientific studies and temporary regulatory shifts, ten years later little seems different. Oil spills continue[24] and the safety regulations promulgated in response to *Deepwater* have been rewritten by the offshore industry.[25] This Section explores the continuing threat of oil spills and reveals the degree to which U.S. drilling regulations fail to prioritize or minimize the risk of future spills from deepwater wells.

A. OIL POSES A PERSISTENT THREAT

Between 2002 and 2016, oil spill volume decreased from roughly eight to three million gallons.[26] Though trending downward,[27] this is still a staggering amount of oil pollution.[28] This section explores the continuing problem oil pollution poses in the United States, the harmful nature of all sizes of spills, and the uncertainty surrounding length of impact and recovery time. Given the length of time ecosystems take to recover and the growing body of science that suggests the detrimental impacts of oil may be even greater than we thought, all possible steps to limit oil spills should be taken.

"Petroleum hydrocarbons are toxic to all forms of life and harm both aquatic and terrestrial ecosystems."[29] In the decade since *Deepwater*, we have gained a clearer picture of the spill's catastrophic impact. Thousands of animals died, hundreds of miles of shoreline were oiled and ecosystems throughout the Gulf region were harmed.[30] It is estimated that "full restoration of the Gulf will

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24. BOEM 2016 UPDATE, *supra* note 14, at 77.

25. Coral Davenport, *Interior Dept. Loosens Offshore-Drilling Safety Rules Dating from Deepwater Horizon*, NY TIMES (May 2, 2019), https://perma.cc/C39V-53BA.

26. JONATHAN L. RAMSEUR, CONG. RESEARCH SERV., RL33705, OIL SPILLS: BACKGROUND AND GOVERNANCE 3 (2017), https://perma.cc/X72V-BLBV.

27. BOEM 2016 UPDATE, *supra* note 14.

28. Ramseur, *supra* note 26, at 3; BOEM, 2016 Update, *supra* note 14.

29. Ismail M.K. Saadoun, *Impact of Oil Spills on Marine Life, in* EMERGING POLLUTANTS IN THE ENVIRONMENT - CURRENT AND FURTHER IMPLICATIONS 77, 78 (Marcelo L. Larramendy & Sonia Soloneski eds., 2015); *see also* OIL IN THE SEA, *supra* note 15, at 125.

30. Visible oil covered 88,500 square miles, thousands of birds died, hundreds of marine mammals were impacted and at least 2100 miles of shoreline were oiled. Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 569–70 (E.D. La. 2015); Zachary Nixon, Scott Zengel, Mary Baker, Marla Steinhoff, Gail Fricano, Shahrokh Rouhani & Jacqueline Michel, *Shoreline oiling from the* Deepwater Horizon *oil spill*, 1 MARINE POLLUTION BULL. 107, 170–78 (2016), 10.1016/j.marpolbul.2016.04.003. Oil had significant impacts on the food chain in the open ocean. In the deep-sea, oil was detected approximately 1,200mi^2 (3200km^2) from the well, critical food sources were harmedand centuries-old deep-sea coral was wiped out. Erik E. Cordes, Daniel O.B. Jones, Thomas A. Schlacher, Diva J. Amon, Angelo F. Bernardino, Sandra Brooke, Robert Carney, Danielle M. DeLeo, Katherine M. Dunlop, Elva G. Escobar-Briones, Andrew R. Gates, Luciana Genio, Judith Gobin, Lea-Anne Henry, Santiago Herrera, Sarah Hoyt, Mandy Joye, Salit Kark, Nelia C. Mestra, Anna Metaxas, Simone Pfeifer, Kerry Sink, Andrew K. Sweetman

require $15 billion to $20 billion."[31]

Deepwater captured the world's attention, but large spills are more common than one might think. In 2018, for example, the National Oceanic and Atmospheric Administration ("NOAA") reported 137 oil spills ranging in size from only thirty gallons to as much as 2.1 million gallons.[32] On the U.S. outer continental shelf between 1971 and 2010, there were 23 large spills of more than 1,000 barrels of oil, or an average of one every 21 months.[33] One study suggests that another event the size of *Deepwater* can be expected in the next twelve to sixteen years.[34]

Although "the greatest risk to the marine environment comes from an uncontrolled release of hydrocarbons from the reservoir, known as a blowout,"[35] even small spills pose pervasive risks[36] because oil is toxic even in very small quantities.[37] Small spills are ubiquitous in the United States. NOAA estimates that thousands of oil spills occur every year in the United States.[38] Most of these spills are small, less than one barrel.[39]

In a vacuum small spills may seem unimportant, but their cumulative effect can be extremely harmful.[40] One spill in the Gulf of Mexico has been leaking for 14 years.[41] In 2004, Hurricane Ivan caused leaks in twenty-five undersea oil wells

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and Ursula Witte, *Environmental Impacts of the Deep-Water Oil and Gas Industry: A Review to Guide Management Strategies*, 4 FRONT. ENVIRON. SCI., Sept. 16, 2016, at 8, doi:10.3389/fenvs.2016.00058 (internal citations omitted).

31. NAT'L COMMISSION ON THE BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING, DEEP WATER: THE GULF OIL DISASTER AND THE FUTURE OF DEEPWATER DRILLING, REPORT TO THE PRESIDENT 210 (2011), https://perma.cc/V5PB-8L8J [hereinafter COMMISSION REPORT].

32. Cassidy, *supra* note 14; *see also Petroleum Oil Spills Impacting Navigable U.S. Waters*, BUREAU OF TRANSP. STAT., https://perma.cc/34Q5-ZDDN (last visited Oct. 26, 2020) (reporting 2,834 spills over 5 million gallons in 2018).

33. *See also* Cordes et al., *supra* note 30, at 13 (internal citations omitted) (reporting 23 spills of more than 1,000 barrels on the U.S. outer continental shelf from 1971 to 2010, averaging 1 every 21 months).

34. Petrissa Eckle, Peter Burgherr & Edouard Michaux, *Risk of Large Oil Spills: A Statistical Analysis in the Aftermath of Deepwater Horizon*, 46 ENVIRON. SCI. TECH. 13002, 13004–05 (2012), doi:10.1016/j.marpol.2013.12.002.

35. Cordes et. al., *supra* note 30, at 10.

36. *See e.g.*, *OIL IN THE SEA*, *supra* note 15, at 2.

37. *See, e.g.*, John P. Incardona, Luke D. Gardner, Tiffany L. Linbo, Tanya L. Brown, Andrew J. Esbaugh, Edward M. Mager, John D. Stieglitz, Barbara L. French, Jana S. Labenia, Cathy A. Laetz, Mark Tagal, Catherine A. Sloan, Abigail Elizur, Daniel D. Benetti, Martin Grosell, Barbara A. Block & Nathaniel L. Scholz, Deepwater Horizon *Crude Oil Impacts the Developing Hearts of Large Predatory Pelagic Fish*, Proceedings of the Nat. Acad. of Sci. of the U.S. E1510, E1510 (2014), https://perma.cc/8FVD-2ZDF.

38. NOAA OFFICE OF RESPONSE AND RESTORATION, *supra* note 6.

39. Cassidy, *supra* note 14; *see also* BOEM *2016 UPDATE*, *supra* note 14, at 76; BUREAU OF SAFETY & ENVTL. ENFORCEMENT, *supra* note 14; Weber & Crew, *supra* note 14; Johansen et. al., *supra* note 14.

40. Weber & Crew, *supra* note 14; *see also Oil in the Sea*, *supra* note 15, at 2.

41. Tegan Wendland, *This Oil Spill has Been Leaking into the Gulf for 14 Years*, NAT'L PUB. RADIO (Apr. 10, 2019), https://perma.cc/U2N8-L9HS.

in the Gulf of Mexico and the collapse of an oil rig owned by Taylor Energy.[42] Fourteen years later, only nine of the wells have been plugged and Taylor Energy is bankrupt.[43] The remaining leaks discharge approximately 100 barrels of oil a day[44] and they are expected to continue to leaking for the next century.[45] These kinds of spills create chronic low level exposures that have been shown to be even more dangerous than larger spills.[46]

The negative impacts of oil pollution can last for decades. In some cases, the potential for long-term harm is foreseen relatively early after a spill. For example, studies estimate that "typical impacts from drilling may persist . . . years to decades . . . in the deep sea,"[47] and Polycyclic Aromatic Hydrocarbons (PAHs)[48] contamination in sediment persists for decades, creating risk of prolonged toxic effects.[49] As we pass *Deepwater's* 10-year anniversary, it is sobering to remember that oil from spills have subsisted in the seafloor[50] and coastline[51] for decades[52] and some ecosystems may take millennia to recover.[53]

Although many harmful effects are immediately apparent, devastating impacts can also develop without warning years after a spill. Four years after the *Exxon Valdez* spill, for example, the Prince William Sound Pacific herring population collapsed. In spite of estimates placing the Sound's populations around 134 thousand tons, by 1993, no fishable concentrations of herring could be found.[54] At the

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42. Emma Grey Ellis, *Thousands of Invisible Oil Spills Are Destroying the Gulf*, WIRED (Dec. 9, 2016), https://perma.cc/M55V-8AFK.

43. *Id*.

44. Wendland, *supra* note 41.

45. Ellis, *supra* note 42.

46. Final Rule: Water Programs; Discharge of Oil, 52 Fed. Reg. 10712, 10716 (Apr. 2, 1987) (codified at 40 C.F.R. Part 110); *see also* OIL IN THE SEA, *supra* note 15, at 1, 4–5, 28, 134.

47. Cordes et. al., *supra* note 30, at 16.

48. PAHs are the naturally occurring components of oil that are toxic in some concentrations. *See* CTRS FOR DISEASE CONTROL AND PREVENTION, *POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)* (2009), https://perma.cc/7V8J-Y3A4. PAHs are the naturally occurring components of oil that are toxic in some concentrations.

49. *Id*.

50. Bernabeu, A. M., S. Fernández-Fernández, F. Bouchette, D. Reya, A. Arcosd, J.M. Bayonad & J. Albaigesd, *Recurrent Arrival of Oil to Galician Coast: The Final Step of the Prestige Deep Oil Spill*, 250–51 J. HAZARD. MATER 82, 82 (2013), doi:10.1016/j.jhazmat.2013.01.057 (oil in tidal sediment 10 years later).

51. Christopher M. Reddy, Timothy I. Eglinton, Aubrey Hounshell, Helen K. White, Li Xu, Richard B. Gaines & Glenn S. Frysinger, *The West Falmouth oil spill after thirty years: the persistence of petroleum hydrocarbons in marsh sediments*, 36 ENVTL. SCI. TECH. 4754, 4754 (2002), doi:10.1021/es020656n.

52. Cordes, *supra* note 30, at 10 (citing Charles R. Fisher, Amanda W. J. Demopoulos, Erik E. Cordes, Iliana B. Baums, Helen K. White & Jill R. Bourque, *Coral communities as indicators of ecosystem-level impacts of the* Deepwater Horizon *spill*, 64 BIOSCIENCE, 796–807 (2014), doi:10.1093/biosci/biu129.

53. *Id*.

54. Richard E. Thorne and Gary L. Thomas, *Herring and the "*Exxon Valdez*" oil spill: an investigation into historical data conflicts*, 1 ICES JOURNAL OF MARINE SCIENCE 44, 44, 47–48. (2008), https://perma.cc/46GB-4WXG.

time, studies concluded the collapse could not have been caused by the spill because observed concentrations of *Exxon* oil were presumed too low to be toxic.[55] After nearly twenty years of study, however, scientists now believe that the spill caused the herrings' disappearance.[56] Similarly, new data suggests that the *Deepwater* spill may have been up to 30 percent larger than originally estimated due to the presence of "invisible and toxic oil" that was not detected in the original satellite imagery.[57] In short, it is extremely difficult to understand the pervasive, long-term effects of oil spills, which underscores the need to develop a more effective regulatory regime for domestic drilling.

Though many assumed that the *Deepwater* spill might have a chilling effect on the industry, that has not borne out. Between 2003 and 2013, the number of drilling rigs in the United States increased by 71 percent.[58] There were 3,555 active wells in the Gulf of Mexico and Pacific Ocean by the end of 2017.[59] By the end of 2018, oil production in the Gulf of Mexico reached 1.9 million barrels per day.[60] Moreover, the Trump Administration plans to "radically expand drilling in waters that were protected by the Obama administration" by offering an unprecedented number of offshore drilling leases in the Atlantic, Pacific, and Arctic oceans.[61] If oil production continues at this rate without meaningful regulations, another major spill is inevitable.[62]

B. REGULATORY RESPONSE TO *DEEPWATER*

Immediately following the *Deepwater* spill, the Obama Administration attempted to minimize the risk of future spills. The Administration began by creating the National Commission on the BP *Deepwater Horizon* Oil Spill and Offshore Drilling[63] (the "Commission") and tasking it with identifying the causes of the disaster and recommending "reforms to make offshore energy production safer".[64] In its 2011 Report, the Commission found that the spill could have been

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55. *Id*. at 44.

56. *Id*. at 47–48.

57. Berenshtein et. al., *supra* note 8, at 2; *see also* GULF COAST ECOSYSTEM RESTORATION COUNCIL, AMERICA'S GULF COAST: A LONG-TERM RECOVERY PLAN AFTER THE DEEPWATER HORIZON OIL SPILL 3 (2010), https://perma.cc/5MN4-CLPU.

58. Krystal L. Mason, Kyla D. Retzer, Ryan Hill & Jennifer M. Lincoln, *Occupational Fatalities During the Oil and Gas Boom—United States, 2003-2013*, CENTERS FOR DISEASE CONTROL & PREVENTION: MORBIDITY & MORTALITY WEEKLY REPORT (May 29, 2015), https://perma.cc/28XC-GWNQ.

59. ALASKA OCS REGION, BUREAU OF OCEAN EMERGENCY MGMT., US DEP'T OF THE INTERIOR, US OUTER CONTINENTAL SHELF OIL SPILL STATISTICS 8 (2018), https://perma.cc/W4HT-JTQG.

60. *U.S. Federal Gulf of Mexico crude oil production to continue to set records through 2020*, U.S. ENERGY INFO. ADMIN: ENERGY TODAY (Oct. 16, 2019), https://perma.cc/EU29-2A4B.

61. *Dramatic Expansion of Leases*, NAT'L PUB. RADIO (Jan. 4, 2018), https://perma.cc/9MQR-H3NV.

62. Eckle et. al., *supra* note 34.

63. COMMISSION REPORT, *supra* note 31, at vi.

64. *Id*. at vi.

prevented and that "[t]he immediate causes of the Macondo well blowout c[ould] be traced to a series of identifiable mistakes made by BP, Halliburton, and Transocean that reveal such systematic failures in risk management that *they place[d] in doubt the safety culture of the entire industry*."[65] The report also identified a number of regulatory gaps that contributed to industry-wide safety concerns.[66]

In response to the Commission's report and other studies,[67] in April of 2016 the Department of the Interior ("DOI") promulgated "the most aggressive and comprehensive reforms to offshore oil and gas regulation and oversight in U.S. history" (the "2016 rgulations").[68] Several of the regulations directly addressed the failures that led to the *Deepwater* spill,[69] including blow out preventer ("BOP") design, testing, and inspection requirements;[70] mandatory safety inspections by government-certified reviewers,[71] and new well control rules related to "safe drilling margins."[72] Because the offshore industry demonstrated that it could not regulate itself,[73] the 2016 regulations were designed to police the industry by requiring safer drilling practices and strengthening government oversight to ensure implementation. This section examines the 2016 regulations and the risks of backtracking.

The Commission found that federal regulations of BOPs were insufficient. In response to industry pressure, in the late 1980s the Mineral Management Service (MMS)[74] reduced the mandated frequency of BOP testing by 50 percent.[75] "The

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65. *Id*. at vii (emphasis added).

66. *Id*. at 74, 126–27 (finding that "MMS regulations were inadequate to address the risks of deepwater drilling.").

67. *See, e.g*., REGULATION AND ENFORCEMENT, BUREAU OF OCEAN ENERGY MGMT., *Report Regarding the Causes of the April 20, 2010 Macondo Well Blowout* 172–73 (2011), https://perma.cc/Z45P-9T5H [hereinafter 2011 BOEM REPORT].

68. *Regulatory Reforms*, BUREAU OF OCEAN ENERGY MGMT., https://perma.cc/2X9K-TQZD, (last visited Mar. 19, 2020); *see also* Final Rule: Oil and Gas and Sulfur Operations in the Outer Continental Shelf—Blowout Preventer Systems and Well Control; 81 Fed. Reg. 25987, n.27 (2016) (codified at 30 C.F.R. Part 250).

69. 30 C.F.R. Part 250 (2016) (addressing "multiple recommendations resulting from various investigations of the *Deepwater Horizon* incident").

70. 30 C.F.R. §§ 250.732 (2016).

71. *See*, *e.g*., 30 C.F.R. §§ 250.732, 250.739(b) (2016).

72. *See* 30 C.F.R. §§ 250.414, 250.427 (2016).

73. *See, e.g*., *The U.S. Chemical Safety Board's Investigation into the Macondo Disaster Finds Offshore Risk Management and Regulatory Oversight still Inadequate in Gulf of Mexico*, U.S. CHEM. SAFETY BD. (Apr. 13, 2016), https://perma.cc/4B5E-7LR8 [hereinafter *CSB Report*]; Michelle West, *How Deepwater Offshore Drillers Have Failed to Uphold Their End of the Bargain: The Policy Infirmities of BSEE's Current Oil Spill Response Framework*, 31 THE GEO. ENVTL. LAW REVIEW 605, 607 (2019).

74. After the blowout, MMS was divided into two new federal agencies: BSEE and BOEM. *See The Reorganization of the Former MMS*, BUREAU OF OCEAN ENERGY MGMT., https://perma.cc/RU2B-S75U (last visited Mar. 19, 2020) [hereinafter *MMS Reorganization*].

75. *See MMS eases rule for BOP testing*, OIL & GAS JOURNAL (June 8, 1998), https://perma.cc/5KAZ-38EA (last visited Mar. 19, 2020).

MMS said the revised testing requirements could save industry $35-46 million per year without compromising safety."[76] The failure of the BOP at the heart of the *Deepwater* spill (the "Macondo BOP")[77] suggests that MMS was wrong.

A BOP is a "a safety-critical device. . . . [that] sits on top of the wellhead and acts as a barrier that can be activated, either manually or automatically, to close in a well and prevent hydrocarbons from flowing up into the riser."[78] BOPs usually contain a number of shearing or sealing mechanisms that can prevent a blowout by shutting the space between the rock formation and the well (the "annulus") or severing the drill pipe.[79] The well that blew out and initiated the *Deepwater* spill (the "Macondo well") was outfitted with a BOP that had only one pipe-severing mechanism, a Blind Shear Ram ("BSR"), which was powered by battery operated solenoids.[80] When the United States brought suit against and sought civil damages from the oil and gas companies responsible for *Deepwater* (the "*Deepwater case*") the court found that the Macondo BOP failed to shut in the well "due to improper maintenance."[81] Third party and internal audits repeatedly identified overdue BOP maintenance issues, but no action was taken to bring the Macondo BOP back into compliance.[82] The BOP failed for at least two reasons: one of the solenoid's batteries had not been changed per manufacturer recommendations,[83] and another solenoid was mis-wired.[84] Parties to the litigation also suggested that the BSR could not shear because the drill pipe was not centered.[85] On April 20, 2010—the date of the blowout—when the *Deepwater* Horizon crew tried to activate the BOP, nothing happened.

The 2016 regulations addressed several of the Macondo BOP's failures head on. First, the regulations beefed up design requirements. In response to the failure of Macondo's single BSR, the 2016 regulations required that all subsea BOPs have two shearing rams capable of shutting in a well by severing the drill pipe,[86] and that BOPs have a separate mechanism to center the drill pipe and ensure

76. *Id*.

77. The Macondo BOP failed as a result of inadequate maintenance and testing. COMMISSION REPORT, *supra* note 31, at 114, 115, 121–22.

78. In re Oil Spill by Oil Rig "Deepwater Horizon" in Gulf of Mexico, on Apr. 20, 2010, 21 F. Supp. 3d 657, 718–22 (E.D. La. 2014) [hereinafter Deepwater Liability Ruling].

79. *Id*.; *see also* Safina, *supra* note 7, at 4.

80. *Deepwater Liability Ruling*, 21 F.Supp.3d at 718–22.

81. *Id*.

82. *Id*. at 718–23; *see also* Joel Achenbach & David Hilzenrath, *As Federal Panel Probes Oil Spill, Picture Emerges of a Series of Iffy Decisions*, WASH. POST (July 25, 2010), https://perma.cc/7KPW-59WA; Ian Urbina, *Workers on Doomed Rig Voiced Concern About Safety*, N.Y. TIMES (Jul. 22, 2010), https://perma.cc/332S-EU9M; Hope M. Babcock, *A Risky Business: Generation of Nuclear Power and Deepwater Drilling for Offshore Oil and Gas*, 37 COLUM. J. ENVTL. L. 63, 93 (2012).

83. *Id*. at 722.

84. *Id*. at 718–22.

85. *Id*. at 723.

86. 30 C.F.R. § 250.733(a)(1) (2016).

BSRs could fully shear.[87] Additionally, the 2016 regulations required that BOP emergency systems have a fail-safe mechanism to ensure continued sealing or shearing regardless of whether the rig was still capable of communicating with the BOP stack.[88]

Second, in response to BP and Transocean's failure to maintain the BOP,[89] the 2016 regulations also updated testing requirements. For example, the new regulations required that a BOP maintain its seal under pressure for 30 minutes before it could be used in a drilling operation.[90] Once installed in a well, subsea pressure testing was required every fourteen days.[91] Every five years, BOPs and associated components had to be taken out of commission, completely broken down and inspected.[92] Finally, the 2016 regulations required that the results of a BOP's pre-installation and initial subsea pressure tests be reported to DOI within seventy-two hours if a DOI representative was unable to witness testing in person.[93]

Finally, the 2016 regulations sought to control the quality of BOP inspections on rigs. Historically, there were two sources of rig inspections required by federal regulation: federal agencies and third-party audits. Both failed to ensure compliance before the *Deepwater* spill. Throughout drilling of the Macondo well, "MMS was the federal agency primarily responsible for leasing, safety, environmental compliance, and royalty collection."[94] In the years preceding the *Deepwater* spill, MMS suffered budget cuts and the frequency of safety inspections diminished. Around the same time, the number of drilling permit applications skyrocketed[95] and drilling technology evolved rapidly.[96] Consequently, at the time of the blowout there was only one MMS inspector for every fifty-four facilities in the Gulf of Mexico region.[97] Moreover, MMS lacked adequate internal inspection policies and failed to adequately train its employees to carry out the required inspections.[98]

Compounding the situation, MMS suffered from a perceived culture of corruption stemming from its lack of independence from the drilling industry. Following the spill, stories emerged about MMS offices where "staff had also socialized with, and received a wide array of gifts from, companies with whom they were conducting business. . . ."[99] In at least one case, an MMS employee

87. 30 C.F.R. § 250.734(a)(16)(i) (2016).
88. 30 C.F.R. § 250.734(a)(6)(vi) (2016).
89. Deepwater Liability Ruling, 21 F. Supp. 3d 657, 724 (E.D. La. 2014).
90. 30 C.F.R. § 250.732(b)(2)(ii) (2016).
91. 30 C.F.R. § 250.737(a)(2) (2016).
92. 30 C.F.R. § 250.739(b) (2016).
93. 30 C.F.R. § 250.737(d)(2)(ii), (3)(ii) (2016).
94. COMMISSION REPORT, *supra* note 31, at 68.
95. *Id*. at 74–75.
96. *Id*.
97. *Id*. at 78.
98. *Id*. at 77–78.
99. *Id*. at 77.

performed inspections of an oil company's platform while simultaneously negotiating an employment contract.[100] During testimony following the spill, an MMS investigator described the relationship between MMS and the oil industry this way: "[o]bviously we are all oil industry . . . We're all from the same part of the country. Almost all of our inspectors have worked for oil companies out on these same platforms."[101]

MMS oversight of Macondo's well was almost non-existent. Indeed, at that time MMS regulations did not require much attention to detail with regard to well design[102] or worst case scenario planning.[103] Even though the *Deepwater Horizon* had previous safety violations,[104] rig inspections were infrequent: MMS missed sixteen inspections in the five years preceding the spill.[105] The last MMS drilling inspection occurred a few weeks before the blowout and was performed by a lone inspector with only four months' experience.[106]

Not surprisingly, the Commission found that federal oversight of oil and gas drilling in the Gulf of Mexico was negligible in the years preceding the spill:

> Many aspects of national environmental law were ignored, resulting in less oversight than would have applied in other areas of the country. In addition, MMS lacked the resources and technical expertise, beginning with its leadership, to require rigorous standards of safety in the risky deepwater and had fallen behind other countries in its ability to move beyond a prescription and inspection system to one that would be based on more sophisticated risk analysis.[107]

DOI entirely reorganized its oil and gas divisions in the wake of the spill. MMS was dissolved and three different federal agencies are now responsible for oil and gas activities: the Office of Natural Resources Revenue, the Bureau of Ocean Energy Management ("BOEM"), and the Bureau of Safety and Environmental Enforcement ("BSEE").[108] By separating responsibilities for

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100. Memorandum from Mary L. Kendall, Acting Inspector Gen., U.S. Dep't of the Interior, to Ken Salazar, Sec'y of the U.S. Dep't of the Interior (May 24, 2010), https://perma.cc/EW5Q-T9L8.

101. Laura Strickler, *BP Rig Missed 16 Inspections Before Explosion*, CBS NEWS (June 11, 2010), https://perma.cc/9ECY-4MED.

102. 2011 BOEM REPORT, *supra* at 67 ("MMS did not have a comprehensive set of regulations specifically addressing deepwater technology, drilling, or well design" in 2010).

103. *Id*. at 84.

104. U.S. COAST GUARD, *REPORT OF INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE EXPLOSION, FIRE, SINKING AND LOSS OF ELEVEN CREW MEMBERS ABOARD THE* MOBILE OFFSHORE DRILLING UNIT DEEPWATER HORIZON 96 (2020), https://perma.cc/HYJ6-SET5.

105. Strickler, *supra* note 101.

106. *Id*. Mr. Neal, the MMS investigator, also testified that during his 2010 inspection of the rig, he did not examine any records related to periodic maintenance of the BOP; physical inspections of the BOP or its components; servicing or repair of the BOP; or modifications of the BOP. *Id*.

107. COMMISSION REPORT, *supra* note 31, at 84–85.

108. *See MMS Reorganization*, *supra* note 74. Under the reorganization, BOEM is responsible for leasing and other development management issues, BSEE enforces environmental regulations and performs inspections, and the Office of Natural Resources Revenue collects royalties. Press release, U.S.

royalty collection, resource management and safety oversight, DOI hoped to "create a tough-minded, but fair, regulator that can effectively evaluate and keep pace with the risks of offshore drilling and will promote the development of safety cultures in offshore operators."[109] While the reorganization was also intended to remedy some of MMS' resource problems, by 2018 BSEE was still woefully understaffed: 130 inspectors are responsible for 20,000 inspections of more than 2,000 facilities annually.[110]

MMS was not the only entity responsible for rig inspections: owners and operators were also required to perform regular safety audits.[111] The problems with unsupervised third-party audits are twofold. First, there are long standing questions about the neutrality of third party audits because "[r]esearch demonstrates that third-party monitors are strongly influenced by their relationships with the firms they monitor and by economic incentives."[112] Specifically, studies have shown that third party auditors are more lenient to firms who pay them directly and with whom they have long standing relationships.[113] Second, third party audits of the *Deepwater Horizon* rig in particular repeatedly demonstrated that critical overdue safety precautions were simply never taken.[114] The Commission recognized that industry response to audits is essential for safety and recommended several policies to incentivize companies to respond meaningfully, including requirements that audits be sent to boards of directors and shareholders,[115] performed by government certified experts, and occur every three to five years.[116]

As a result of these deficiencies, the 2016 regulations created an entirely new inspection and training program called the BSEE Approved Verification Organization ("BAVO").[117] BAVO effectively ended inspections by underqualified or biased inspectors and created a reliable, government-certified back stop for over-worked federal inspectors.[118] BAVO certification required certain

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Dep't of the Interior, Fact Sheet: The BSEE and BOEM Separation: An Independent Safety, Enforcement and Oversight Mission (Jan. 19, 2011), https://perma.cc/DDS8-RGGJ [hereinafter Separation Fact Sheet].

109. Separation Fact Sheet, *supra* note 108.

110. Jie Jenny Zou, *8 Years After Deepwater Horizon Explosion, Is Another Disaster Waiting to Happen?*, NAT'L PUB. RADIO (Apr. 20, 2018), https://perma.cc/3JEG-QLN6.

111. Deepwater Liability Ruling, 21 F. Supp. 3d 657, 718–23 (E.D. La. 2014). For example, pursuant to 30 C.F.R. § 250.466, Macondo's well had to be disassembled and inspected the BOP every 3 to 5 years. *Id*.

112. Jodi L. Short & Michael W. Toffel, *The Integrity of Third-Party Compliance Monitoring*, 42 ADMIN. & REG. L. NEWS 1 at 22 (2016); *see also* Jacqueline L. Weaver, *Offshore Safety in the Wake of the Macondo Disaster: The Role of the Regulator*, 36 HOUS. J. INT'L L. 379, 471 (2014).

113. Short & Toffel, *supra* note 112, at 22.

114. COMMISSION REPORT, *supra* note 31, at 6 ("A September 2009 BP safety audit had produced a 30-page list of 390 items requiring 3,545 man-hours of work."); Urbina, *supra* note 82.

115. COMMISSION REPORT, *supra* note 31, at 242.

116. *Id*. at 254, 286.

117. *See, e.g*., 30 C.F.R. § 250.739(b) (2016).

118. 30 C.F.R. § 250.732(a) (2016).

industry expertise and specialized knowledge of BOPs, requiring "previous experience in verification or in the design, fabrication, installation, repair, or major modification of BOPs. . . ."[119] These regulatory changes reflected the need for more government oversight to minimize potential bias and maximize safety.[120]

Finally, the 2016 regulations also addressed drilling safety. As deepwater wells are drilled, drillers must maintain wellbore pressure to prevent two things: unwanted hydrocarbon flow from the surrounding rock formation ("pore pressure") and rock formation fractures ("fracture gradient"). Drillers maintain pore pressure by pumping heavy "drilling mud" down the wellbore to push out against the formation but not so much as to fracture it. The window between these pressures is known as a "safe drilling margin." Failure to maintain a safe drilling margin can result in well control problems whereby hydrocarbons rush into the well.[121]

These new safety regulations were intended to address lessons learned from *Deepwater*: BP's failure to maintain a safe drilling margin on the Macondo well was one of the causes of the spill.[122] The Macondo well had little or no drilling margin on the day of the blowout. The well also lacked a successful cement barrier.[123] Therefore, the only thing preventing a blowout was heavy drilling mud pressing down on the formation. Once the drilling mud was removed for temporary abandonment procedures on April 20, 2010, the Macondo well became underbalanced and hydrocarbons flooded in.[124] Drilling margin regulations were revised to require that "[w]hen you cannot maintain the safe margins [as defined by the regulations], you must suspend drilling operations and remedy the situation."[125]

2016 drilling safety audits showed that these regulatory changes were absolutely necessary. Several months before the reforms were implemented, the Chemical Safety Board (CSB) released a study that found, in spite of the *Deepwater* disaster, "a culture of minimal regulatory compliance continues to exist in the Gulf of Mexico and risk reduction continues to prove elusive."[126] Unfortunately, the regulations were only on the books for one year before significant changes were made.[127]

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119. 30 C.F.R. § 250.732(a)(3)(i) (2016).
120. Short & Toffel, *supra* note 112, at 24.
121. Deepwater Liability Ruling, 21 F. Supp. 3d 657, 672–73 (E.D. La. 2014).
122. *Id*. at 742; *see also* COMMISSION REPORT, *supra* note 31, at 94.
123. *Deepwater Liability Ruling*, 21 F.Supp.3d at 697.
124. *Id*.; COMMISSION REPORT, *supra* note 31, at 94.
125. 30 C.F.R. § 250.427(b) (2016).
126. *CSB Report*, *supra* note 73 (citing CSB's draft report).
127. Coral Davenport, *Trump Orders Easing Safety Rules Implemented After Gulf Oil Spill*, N.Y. TIMES (Apr. 27, 2016), https://perma.cc/S3U9-3TGF.

C. REGULATORY ROLLBACKS

The Trump Administration rolled back sixty-eight of the 2016 regulations in 2019.[128] In an effort led by DOI Secretary—and former oil industry lobbyist—[129]David Bernhardt, and implemented by BSSE, the rollbacks were intended to "eliminate[] unnecessary regulatory burdens."[130] The rollbacks are estimated to save the oil industry about $1 billion over ten years[131] and were supported[132] by the American Petroleum Institute ("API"), a trade association for the oil and gas industry that helped draft these rollbacks.[133]

Specifically, the Trump Administration's new BOP and Well Safety Rule weakens maintenance, design,[134] testing,[135] and inspection requirements for BOPs.[136] For example, drillers can seek waivers for longer intervals between BOP tests and are no longer required to provide those test results to BSEE or ensure that *every* BOP has two blind shear rams. The rollbacks also entirely abandoned the BAVO program, replacing it with a more traditional third-party audit requirement that allows industry insiders to inspect BOPs without direct

128. Editorial, *Trump's rewrite of offshore drilling rules could have been worse. But we shouldn't settle for it*., WASH. POST (May 5, 2019), https://perma.cc/7HHJ-G68H [hereinafter *Trump's rewrite*]. *See generally* 30 C.F.R. Part 250 (2019).

129. Coral Davenport, *Senate Confirms Bernhardt as Interior Secretary Amid Calls for Investigations into His Conduct*, N.Y. TIMES (Apr. 11, 2019), https://perma.cc/6QV7-6C2D.

130. Press Release, U.S. Dept. of the Interior, BSEE Finalizes Improved Blowout Preventer and Well Control Regulations (May 2, 2019), https://perma.cc/2QQD-J34P.

131. *Trump's rewrite*, *supra* note 128.

132. *Id*.

133. S. Elizabeth Birnbaum, *Trump's latest regulatory rollback should horrify you*, WASH. POST (May 7, 2019), https://perma.cc/QP2M-D922. *See generally* 30 C.F.R. Part 250 (2019).

134. 30 C.F.R. § 250.733 (2019) does not require two shearing rams in every case. Pursuant to 30 C.F.R. § 250.733(a)(1) (2016), BOPs were required to have two shearing rams capable of severing a drill pipe. The 2019 regulations also removed a 2016 requirement that BOP's autoshear, deadman and EDS devices be fail safe once activated. *Compare* 30 C.F.R. §§ 250.734(a)(6) (2016) to 250.734(a)(6) (2019). Though the 2019 regulations do require that BSRs center a drill pipe, changes also no longer require a separate centering mechanism. Only new BSR technology is capable of self-centering and the regulations do not require that those specific BSRs be used. *Compare id*. to 30 C.F.R. § 250.734(a)(16)(ii) (2016).

135. Pre-installation, 30 C.F.R. § 250.732(b)(2)(ii) (2019) only requires that BOPs hold their seal under pressure for 5 minutes; 30 C.F.R. § 250.732(b)(2)(ii) (2016) required 30-minutes. Under 30 C.F.R. § 250.373(a)(2) (2016), BOP systems had to be pressure tested every 14 days but C.F.R. § 250.373(a)(4) (2019) allow for a waiver of this requirement and adopt a 21-day test schedule. The 2019 regulations also changed the thoroughness of BOP testing. 30 C.F.R. § 250.739(b)(2016) required that "[a] complete breakdown and detailed physical inspection of the BOP and every associated system and component [] be performed every 5 years" with a BAVO inspector present. *Id*. The 2019 regulation requires only "[a] major, detailed inspection of the well control system components" every five years and does not require that an inspector be present. 30 C.F.R. § 250.739 § (b)(2019). The regulations do not define a "major, detailed inspection."

136. *Compare* 30 C.F.R. §§ 250.732 (2016) to 250.732 (2019); §§ 250.373(a)(4)(2016) to 250.739 (b)(2019).

government oversight.[137] The new regulations also allow drilling to continue past the safe margin requirement set in 2016.[138]

These rollbacks ignore what we learned from the *Deepwater* spill and subsequent safety studies: effective government oversight and rigorous safety standards are necessary to control the offshore industry.[139] The rollbacks also turn a blind eye to recent drilling safety data. According to the U.S Department of Transportation, rig operators in the Gulf of Mexico ("Gulf") reported 1,129 equipment failures involving BOPs in 2017.[140] That is more than three-quarters of the rigs operating in the Gulf at that time.[141]

Not surprisingly, the rollbacks were met with substantial outcry[142] and litigation[143] from environmental groups and applause from the oil and gas industry.[144] The final version of the rollbacks received approximately 118,000 public comments, a large majority of which "voiced significant concerns about the proposed changes"[145]—including not just serious safety concerns, but also regulatory uncertainty.[146]

In the absence of reliable government regulations, the text of the Clean Water Act ("CWA") plays an increasingly important role in spill prevention. For example, courts are uniquely positioned to control the offshore industry drawing upon the punitive and deterrent capacity[147] of the CWA. Section 311 of the CWA

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137. *Compare* 30 C.F.R. §§ 250.732 (2016) to 250.732 (2019) (entirely rolling back the BAVO program).

138. *Compare* 30 C.F.R. §§ 250.427 (2016) to 250.427(b)(2) (2019). The 2016 regulation required drillers to stop drilling if the margin fell below safe levels, but the 2019 amendments added an alternative that allows drillers to use their own judgment regarding whether to keep drilling without a safe margin. 30 C.F.R. §§ 250.427 (2019). *See also Technical Fact Sheet: Blowout Preventer Systems and Well Control Rule Final Revisions*, BUREAU OF SAFETY AND ENVTL. ENFORCEMENT (May 1, 2019), https://perma.cc/MNJ9-JHWV; Davenport, *supra* note 25.

139. *CSB Report*, *supra* note 73.

140. U.S. DEP'T OF TRANSP., BLOWOUT PREVENTION SYSTEM SAFETY: 2017 ANNUAL REPORT, at vii (2018) https://perma.cc/U8DF-SGY3.

141. *Id.*

142. Press Release, Nat'l Res. Def. Council, Trump Administration Guts Offshore Drilling Safety Standards (May 2, 2019), https://perma.cc/FR9F-LDXS ("The well control rule was one of the most important actions we took . . . in response to the BP-style disaster at sea . . . ").

143. Press Release, Ctr. for Biological Diversity, Lawsuit Challenges Trump Administration's Rollbacks of Offshore Drilling Safety Regs (June 11, 2019), https://perma.cc/3EY4-S7YX.

144. Laurel Wamsley, *Trump Administration Moves to Roll Back Offshore Drilling Safety Regulations*, NAT'L PUB. RADIO (May 30, 2019) https://perma.cc/WGV7-KF3E.

145. Lefebvre & Wolff, *supra* note 18; *see also* 30 C.F.R. § 250 (2019).

146. President Trump's changes to the BOP and Well Control Rules are not the only source of post-*Deepwater* confusion, but discussion of other post-Macondo regulatory changes is beyond the scope of this Article. For an in-depth discussion of the ever-changing nature of drilling regulations, see Hannan, *supra* note 19 at 1003.

147. Kenneth Mann, *Punitive Civil Sanctions: The Middleground Between Criminal and Civil Law*, 101 *YALE L.J.* 1795, 1797 (1992). *See also* Tull v. United States, 481 U.S. 412, 423 (1987) (Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 576 (E.D. La. 2015) ("Two objectives, certainly after the amendments by the Oil Pollution Act of 1990, are to punish polluters and deter future oil spills by the violator and potential violators."); United States v. Coastal States Crude Gathering Co., 643 F.2d 1125,

expresses the will of Congress to deter oil spills and enables courts to do so by giving them the power to reshape the risk profile of deepwater drilling.[148] If, for example, courts use the CWA the way it is intended, they can assess civil penalties that are high enough and impose liability that is extensive enough to discourage defendants from future violations.[149] Indeed, if penalties are sufficiently severe, "future violations by potentially like-minded dischargers" can also be curbed.[150] As discussed in Part III, below, the text of Section 311 gives courts the power to impose both strict liability and significant mandatory penalties. The Act's purpose compels courts to use this power to reduce oil pollution and decrease the likelihood of another *Deepwater*-like incident.

Deepwater drilling is dangerous,[151] oil is toxic, and safety regulations designed to prevent another *Deepwater* have been rolled back. Despite the technological advances that resulted from the *Deepwater* spill,[152] industry safety practices and government oversight are still lacking.[153] Although these problems are unlikely to change on their own, the CWA provides the means for federal prosecutors and courts to aggressively deter the deepwater drilling industry from risky practices and punish those who pollute our waters.[154] Part II explores the increasingly punitive nature of U.S. oil pollution laws and illustrates how the amendments to Section 311 in 1990 shifted the cost of oil pollution entirely to the oil industry.

II. THE PUNITIVE FORCE OF US OIL POLLUTION LAWS

"Oil spills are a real and continuing threat to our waters, our wildlife and ourselves, and we've got to do as much as we can, first, to prevent them and, second to protect ourselves as much as possible when they do occur. . . . This is truly a national problem."[155]

1128 (5th Cir. 1981) (§ 1321(b)(6) penalty, pre-OPA) (quoting United States v. Marathon Pipeline Co., 589 F.2d 1305, 1309 (7th Cir. 1978) ("to achieve the result of clean water as well as to deter conduct causing spills.")); United States v. Mun. Auth. of Union Twp., 929 F. Supp. 800, 806 (M.D. Pa. 1996), *aff'd*, 150 F.3d 259 (3d Cir. 1998) [hereinafter Dean Dairy I] ("The Clean Water Act's penalty provision is aimed at deterrence with respect to both the violator's future conduct (specific deterrence) and the general population regulated by the Act (general deterrence)").

148. *See generally* 33 U.S.C. § 1321(b)(1).

149. Weber & Crew, *supra* note 14, at 167.

150. *Tull*, 481 U.S. at 422–23; *Dean Dairy I*, 929 F. Supp. at 806.

151. For discussion of the dangers of deepwater drilling, see *infra* Part I, section I.A; *supra* Part III, section III.B.i.

152. L.M. Sixel, *Too Often, safety advances in offshore industry grew from tragedy*, HOUS. CHRON. (May 1, 2018), https://perma.cc/L6K3-P49N. *But see* Ayesha Rascoe, *Oil spill cleanup relies on decades-old technology*, REUTERS (June 10, 2011), https://www.reuters.com/article/us-usa-spill-response/oil-spill-cleanup-relies-on-decades-old-technology-idUSTRE75961820110610.

153. West, *supra* note 73, at 610.

154. Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 576 (E.D. La. 2015).

155. 101 Cong. Rec. S1380 at 21725 (Aug. 2, 1990).

Senator Carl Levin, 8/2/1990
Oil Pollution Act of 1990, Conference Report

Though our understanding of pollution has changed over time, the objective of U.S. water pollution laws has been consistent for decades: protect the integrity of the nation's waters by minimizing or eliminating polluting discharges.[156] This Part examines how the United States has applied that objective in the context of oil pollution; specifically how the increasingly harsh remedies used to enforce core U.S. oil pollution laws illustrate the consistency of Congress' intent to eliminate oil pollution through deterrence.[157] Specifically, textual changes and legislative history demonstrate that Congress intended that the courts would curb oil pollution with deterrence. Because "statutory history (the formal evolution of a statute, as Congress amends it over the years) is always potentially relevant,"[158] courts should apply the 1990 amendments to Section 311's liability and penalty schemes to their fullest.

Federal laws specifically prohibiting oil pollution have been on the books since the industrial revolution,[159] but no single approach to spill response and civil penalties existed until 1990. The Oil Pollution Act of 1924 (the "1924 Act") forbade intentional "discharges of oil by any method. . .into or upon the coastal waters of the United States."[160] Violating this provision could lead to a misdemeanor fine of $500 to $2,500 and/or imprisonment for up to a year.[161]

Complementing the 1924 Act, in 1953, the United States enacted the Outer Continental Shelf Lands Act ("OCSLA") to govern federally owned offshore oil and gas.[162] OCSLA's 1978 amendments created a strict liability scheme for cleanup and damages against owners and operators of "facilities" and oil carrying vessels.[163] Facility liability was capped at $35 million unless the spill was caused "by willful misconduct or gross negligence," or by a violation of "applicable safety, construction, or operating standards or regulations" within the owner's or operator's privity of knowledge.[164]

In response to major oil spills in the late 1960s,[165] oil spill provisions were added to Section 311 of the Federal Water Pollution Control Act—the official

156. Rivers and Harbors Appropriation Act of 1899, 30 Stat. 1121, 33 U.S.C. § 403 (1899).

157. Weber & Crew, *supra* note 14, at 161–68.

158. ESKRIDGE ET AL., *supra* note 2, at 1202; *see also* Scalia & Garner, *supra* note 4, at 256 ("If the legislature amends . . . other than by way of a consolidating statute or restyling project, a significant change in language is presumed to entail a change in meaning.").

159. *See, e.g.*, *Pollution of Navigable Waters: Hearings on H.R. 10625 Before the H. Comm. on Rivers & Harbors*, 71st Cong. 4 (1930).

160. Oil Protection Act of 1924: ch. 316, 43 Stat. 604 (1924) (repealed at Pub. L. 91-224, 84 Stat. 91); 33 U.S.C. § 411 (1964).

161. *Id.*

162. Outer Continental Shelf Lands Act (OCSLA), Pub. L. No. 83-212, ch. 345, 67 Stat. 462 (1953) (codified as amended at 43 U.S.C. §§ 1331–56 (2006)).

163. OCSLA, Pub. L. No. 95-372, 92 Stat. 629 (1978).

164. *Id.* at § 304(b), 92 Stat. at 675–76.

165. *Hearing Before the H. Subcomm. on Water Res. of the Comm. on Pub. Works & Transp.*, 101st Cong. 10,333 (1990) (Discussing the galvanizing impact of large oil spills at the end of the 1960s).

name of the CWA—in 1972.[166] Initially Section 311 provided up to $5,000 civil penalties per discharge,[167] but the Act only extended to owners and operators and discharges had to be in "harmful amounts" to trigger liability.[168] In most cases, removal costs were capped at $8 million.[169] Section 311 included the same zero-tolerance policy for oil spills that it has today.[170]

Legislative history from the 1972 amendments to Section 311 demonstrate that Congress knew federal oil pollution controls were failing. In reference to the Act's criminal sanctions, the Senate Committee on Public Works concluded that existing criminal sanctions were insufficient to "encourage compliance"[171] and that civil penalties also needed to be more severe: "the committee believes that the discharge of such [hazardous polluting] substances should be subject to penalty even though cleanup is not practicable. In this way, each carrier or handler evaluates the risk of discharge and determines whether or not the potential penalty is worth the risk."[172] This history clearly indicates that Section 311 penalties are intended to achieve the Act's zero-pollution policy with deterrence.

Even though the 1972 amendments to Section 311 represented major improvements for federal oil pollution control, enforcement was still spotty.[173] In 1977, Section 311 of the CWA was amended again to extend civil liability to "persons in charge" and cover discharges in amounts that "may be harmful." Civil penalties of up to $25,000 per day of violation or $1,000 per barrel of oil discharged were available,[174] and liability caps for removal costs from onshore and offshore facility spills were increased to $50 million.[175] Even though these changes dramatically increased the scope of potential liability for oil polluters, major oil pollution incidents persisted due to continuing regulatory failures and the reluctance of courts to draw upon the full force of existing law.

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166. CWA Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 816. Congress added oil pollution provisions (33 U.S.C. § 1321(b)) to the CWA in 1972, Pub. L. 92-500, 86 Stat. 816 (1972) (codified as amended at 33 U.S.C. §§ 1251–1376 (1988)) [hereinafter 1972 Section 311]. Other changes included in the 1972 amendments to the FWCPA are beyond the scope of this Article. *But see* Robert Glicksman & Mathew Batzel, *Science, Politics, Law, and the Arc of the Clean Water Act: The Role of Assumptions in the Adoption of a Pollution Control Landmark*, 32 WASH. U. J. L. & POL'Y 99, 104 (2010). The 1972 amendments also superseded 1970's Water Quality Control Act of 1970, Pub. L. No. 91-224, 84 Stat. 91 (superseded by CWA as codified at 33 U.S.C. §§ 1251–1376 (1994)).

167. 33 U.S.C. § 1321(b)(3) & (b)(6) (1972).

168. *Id*. § 11(b)(2), (b)(3) (1972).

169. Section 311 (f)(2) (1972) PUBLIC LAW 92-500-OCT. 18, 1972. Cap could be lifted in cases of willful negligence or willful misconduct by the owner or operator or within their privity or knowledge.

170. 33 U.S.C. § 1321(b)(1) (1972).

171. *A Legislative History of the Water Pollution Control Act Amendments of 1972*, Ser. No. 93-1, Vol. 2, at 1482 (1973).

172. *Id*. at 1484.

173. See 101 Cong. Rec. S1380 at 21723 (Aug. 2, 1990) ("In the aftermath of the *Exxon Valdez* disaster, many of us were shocked by the inadequacies in our current scheme of laws governing oil-spills.").

174. 33. U.S.C. § 1321 (a)(7) (1977).

175. 33. U.S.C. § 1321(A)(7)(f)(1)–(3) (1977).

The gap that these enforcement failures created became increasingly apparent when the United States experienced a string of major oil spills in 1989. After the *Exxon Valdez* tanker dumped 11 million gallons off the coast of Alaska, spills in Rhode Island, the Delaware River, and the Houston Ship Channel followed over the next three months.[176] Despite ongoing opposition from the oil industry,[177] these spills spurred Congress to act.[178] In recognition of the patchy nature[179] of the nation's previous oil spill regimes,[180] Congress explained that:

> What the Nation needs is a package of complementary... laws that will adequately compensate victims of oil spills, provide quick, efficient cleanup, minimize damage to fisheries, wildlife and other natural resources and internalize those costs within the oil industry and its transportation sector. Instead, there is a fragmented collection of Federal and State laws. . . .[181]

Finally, eighteen years after Section 311 was added to the CWA, the nation's oil pollution laws were consolidated into the Oil Pollution Act ("OPA") of 1990,[182] which created new regulations pertaining to oil spills and amended Section 311 of the CWA.[183]

OPA complements CWA Section 311 of the CWA.[184] OPA was implemented to address the concrete cost of an oil spill by requiring responsible parties to clean up their own spills and pay for resulting damages.[185] By focusing on actual costs and

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176. *Oil Spill Liability and Compensation*, *Hearing Before the H. Subcomm. on Water Res. of the Comm. on Pub. Works & Transp*., 101st Cong. 272, 2 (1990) (Statement by Rep. Hammerschmidt)*; see also* OPA, S. Rep. No. 101-94, at 2–3 (1989), reprinted in 1990 U.S.C.C.A.N. 722, 724.

177. Robert Force, Martin Davies & Joshua S. Force, *Deepwater Horizon: Removal Costs, Civil Damages, Crimes, Civil Penalties, and State Remedies in Oil Spill Cases*, 85 TUL. L. REV. 889, 894 (2011) ("The international community of oil interests and the insurance industry reacted with horror to OPA."),

178. 26 U.S.C. §9509 (2006). *See also Oil Spill Liability and Compensation*, *Hearing Before the H. Subcomm. on Water Res. of the Comm. on Pub. Works & Transp*., 101st Cong. 272, 2 (1990) (Statement by Rep. Hammerschmidt) ("In light of this spring's tragic spill off the coast of Alaska, and the three spills this past weekend in Rhode Island, Delaware, and Texas, the need for action on comprehensive oil spill legislation has never been as clear."); 101 Cong. Rec. S1380 at 21725 (Aug. 2, 1990). ("The Nation collectively recoiled at the environmental damage caused by the [*Exxon Valdez*] tanker's 11 million gallon spill. The public outcry galvanized Congress into action . . . ").

179. Stephen R. Eubank, *Patchwork Justice: State Unlimited Liability Laws in the Wake of the Oil Pollution Act of 1990*, 18 MD. J. INT'L L. 149, 151 (1994).

180. *EPA History: Water - The Challenge of the Environment: A Primer on EPA's Statutory Authority*, ENVTL. PROT. AGENCY, https://perma.cc/X6SU-3JEW (last updated Oct. 6, 2020).

181. S. Rep. No. 101-94, at 2 (1989), *reprinted in* 1990 U.S.C.C.A.N. 722, 723.

182. Cynthia M. Wilkinson, L. Pittman & Rebecca F. Dye, *Slick Work: An Analysis of the Oil Pollution Act of 1990*, 12 J. ENERGY NAT. RES. & ENVTL. L. 181, 189 (1992); *see also* Deepwater Port Act of 1974 (33 U.S.C. §§ 1501–24 (1988); title III of the OCSLA Amendments of 1978 (U.S.C.A. §§ 1811–24 (West 1988)); and the Trans-Alaska Pipeline Authorization Act (43 U.S.C.A. §§ 1651–55 (West 1988 & Supp. 1992).

183. Oil Pollution Act, Pub. L. No. 101-380, 104 Stat. 484 (1990) (codified as amended in scattered sections of the U.S.C.); *see also* Wilkinson et. al., *supra* note 182, at n.49.

184. Apex Oil Co., Inc. v. United States, 208 F. Supp. 2d 642, 654 (E.D. La. 2002).

185. 33 U.S.C. § 1321(c)(5)(A).

damages, Congress' goal was restitution.[186] Meanwhile, the CWA was amended to have sharper teeth. The changes included larger civil penalties,[187] strict liability,[188] and increased per barrel penalties in cases of gross negligence and willful misconduct.[189] As a Senate report on OPA 1990 explained, CWA "penalties are punitive in nature and serve a deterrent purpose, while [natural resource damages under OPA] are intended to compensate the public for natural resource injuries resulting from an oil spill."[190] Taken together, OPA and the CWA provide comprehensive financial compensation for spills.

Throughout nearly a century's evolution, the manner of oil pollution regulation has changed but Congress' disdain for oil pollution has not.[191] It is indisputable that Section 311 is intended to control and eliminate oil pollution through its zero-spill policy.[192] Over time Congress's approach to controlling oil pollution with the CWA has shifted towards a more aggressive regulatory framework based on punishment and deterrence.[193] Because statutory interpretation dictates that courts apply statutory amendments "to have real and substantial effect,"[194] Section 311 should be applied to deter future spills in furtherance of Congress' zero-spill policy.

III. SECTION 311: THE WILL OF CONGRESS

[I]t makes sense to place the cost of pollution on the enterprise . . . which statistically will cause pollution and in fact does cause pollution.

United States v. Tex-Tow[195]

Section 311 has a six-step process for assessing oil spill liability. Its liability standard is triggered when "[1] [a]ny person [2] who is the owner, operator, or person in charge [3] of any vessel, onshore facility, or offshore facility

186. RESTORE ACT, S. Rep. No. 112-100 at 15 (2011) ("NRD claims are intended to compensate the public for natural resource injuries resulting from an oil spill.")

187. 33 U.S.C. § 1321(b)(7)(A), (D).

188. 33 U.S.C. § 1321(b)(7)(A).

189. 33 U.S.C. §1321(b)(7)(D).

190. RESTORE ACT, S. Rep. No. 112-100 (2011); *see also* H.R. Rep. No. 101-653 at 52 (1990) (Conf. Rep.), *reprinted in* 1990 U.S.C.C.A.N. 779, 833; Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 576 (E.D. La. 2015); United States v. Coastal States Crude Gathering Co., 643 F.2d 1125, 1128 (5th Cir. Apr. 1981) (§ 1321(b)(6) penalty, pre-OPA) (quoting United States v. Marathon Pipeline, 589 F.2d 1305, 1309 (7th Cir. 1978).

191. 1924 OPA outlawed "discharges of oil by any method." OPA 1924, ch. 316, 43 Stat. 604 (1924). Section 311 of the CWA enacts "the policy of the United States that there should be "*no discharges of oil*" into U.S. waters. 33 U.S.C. § 1321(b)(1).

192. 33 U.S.C. § 1321(b)(1); *see generally supra* Part III.

193. RESTORE ACT, S. Rep. No. 112-100 at 14 (2011) (recognizing that "Clean Water Act penalties are punitive in nature and serve a deterrent purpose . . . ").

194. Stone v. Immigr. Naturalization Serv., 514 U.S. 386, 397 (1995); ESKRIDGE ET AL., *supra* note 2, at 1198 (explaining the "presumption of purposive amendment"); *see also, e.g.*, Rumsfeld v. Forum for Acad. & Institutional Rights, Inc., 547 U.S. 47, 57–58 (2006).

195. 589 F.2d 1310, 1314–15, n.11 (7th Cir. 1978).

[4] from which oil . . . is discharged[196] [5] into or upon navigable waters of the United States[197] [6] in a quantity that "may be harmful."[198] Because this is a strict liability standard, civil penalties for violations are mandatory.[199] Once a defendant is found liable, courts assign a maximum per barrel penalty based on the defendant's degree of fault—either no fault, negligence, gross negligence or willful misconduct.[200] Courts then quantify the number of barrels spilled and, finally, assess a penalty below or equal to the statutory maximum using eight penalty factors.[201]

This Part discusses how this standard should be applied to maximize the punitive and deterrent impacts of the Act in furtherance of Congress' zero-spill policy. The Act shifts the cost of pollution to the oil industry by holding all members of a "polluting enterprise" liable for a single spill.[202] Further, liability is triggered by discharges that "*may* be harmful," which recognizes the detrimental impact of small spills and invites courts to punish violators who habitually pollute our waters.[203]

A. "POLLUTING ENTERPRISES" ARE STRICTLY LIABLE

Under the Act, "owners, operators and persons in charge" may all be held liable for oil spills. "Owner or operator" is simply defined as any person "owning, operating, or (in the case of vessels) chartering an onshore facility, offshore facility, or vessel."[204] "Person in charge" is not defined, but the Act defines person to include corporations and other formal business entities.[205] Courts have construed these terms broadly to support the Act's zero-discharge policy.[206]

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196. 33 U.S.C. § 1321(b)(7)(A).

197. *Id*. Liability may also be triggered by discharges "in connection with activities under the Outer Continental Shelf Lands Act." *Id*.

198. 33 U.S.C. § 1321(b)(3)–(4); 40 C.F.R. § 110.3(b).

199. 33 U.S.C. § 1321(b)(7)(A), (D) (violators "*shall* be subject to civil penalty"); *see also In re* Deepwater Horizon, 753 F.3d 570, 575 (5th Cir. 2014) [hereinafter Deepwater Appeal];

Water Quality Ins. Syndicate v. United States, 522 F. Supp. 2d 220, 226 (D.D.C. 2007) [hereinafter WQIS 2007]; *see also* Atl. States Legal Found., Inc., v. Tyson Foods, Inc., 897 F.2d 1128, 1142 (holding that the same language in Section 309(d) mandates a penalty); United States v. Egan Marine Corp., No. 08 C 3160, 2011 WL 8144393, at *6 (N.D. Ill. Oct. 13, 2011) (holding that penalties are mandatory under CWA § 311 and analogizing it to similar Section 309(d) cases); United States v. Gulf Park Water Co., 14 F. Supp. 2d 854, 858 (S.D. Miss. 1998) (same).

200. 33 U.S.C. § 1321(b)(7)(A), (D).

201. 33 U.S.C. § 1321(b)(8).

202. Apex Oil Co., v. United States, 530 F.2d 1291, 1292 (8th Cir. 1976).

203. 33 U.S.C. § 1321(b)(3) (Supp. V 1981), Pub. L. No. 95-576 § 1(b)(4), 92 Stat. 2467, 2468.

204. *See* 33 U.S.C. § 1321(a).

205. *Apex Oil*, 530 F.2d at 1292.

206. Courts' broad application of the nation's clean water laws is nothing new: "The generous construction of water pollution laws required by the Supreme Court is amply demonstrated in many cases." United States v. Ashland Oil & Transp. Co., 504 F.2d 1317, 1328–29 (6th Cir. 1974) (citing United States v. Pa. Indus. Chem. Corp., 411 U.S. 655, 669–70 (1973)); United States v. Standard Oil Co., 384 U.S. 224, 226, 230, (1966); United States v. Republic Steel Corp., 362 U.S. 482, 491(1960); *see also* Sabine Towing & Transp. Co. v. United States, 666 F.2d 561, 565 (Ct. Cl. 1981) ("section 1321 as a whole that should be construed liberally.").

Courts have consistently held that the terms "owner," "operator," or "person in charge" provide three distinct possibilities for liability under Section 311.[207] This is appropriate given that "[I]t is a cardinal principle of statutory construction that a statute ought, upon the whole, to be so construed that, if it can be prevented, no clause, sentence, or word shall be superfluous, void or insignificant."[208] Indeed, the text of the Act enumerates these possible parties in a conjunctive list.[209] Courts therefore need not choose between "owners, operators, or persons in charge" when assigning liability: all three should be held responsible.[210]

By holding multiple parties liable for a single spill, courts punish the "polluting enterprise" whose business created the polluting opportunity. This approach not only deters the industry at large, it shifts the cost of pollution to the industry that creates it. Courts have recognized that:

> Strict liability, though performing a residual deterrent function, is based on the economic premise that certain enterprises ought to bear the social costs of their activities. In the [CWA] in general, Congress has made a legislative determination that polluters rather than the public should bear the costs of water pollution.[211]

The best way to achieve this cost-shifting goal is penalizing as many members of a polluting enterprise as Section 311 allows.[212]

The *Deepwater* case provides an excellent example of the reach of the Act's liability scheme. The United States brought civil CWA claims against Transocean,

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207. Deepwater Appeal, 753 F.3d 570, 575 (5th Cir. 2014) (describing civil penalty as "an absolute liability system with limited exceptions" and explained that "any culpability on the part of [others] does not exempt the well owners from the liability at issue here . . . "); *see also* Sierra Club, Inc. v. Tyson Foods, Inc., 299 F. Supp. 2d 693, 716 (W.D. Ky. 2003) (refusing to define "person in charge" to necessarily include owner or operator).

208. TRW Inc. v. Andrews, 534 U.S. 19, 31 (2001) ("It is a cardinal principle of statutory construction that a statute ought . . . to be so construed that . . . no clause, sentence, or word shall be superfluous, void or insignificant.") (internal quotations omitted).

209. Scalia & Garner, *supra* note 4, at 116; ESKRIDGE ET AL., *supra* note 2, at 1197.

210. United States v. M/V Big Sam, 681 F.2d 432, 438–39 (5th Cir. 1982) (concluding that the United States could sue the owner or operator or both).

211. United States v. Marathon Pipeline, 589 F.2d 1305, 1309 (7th Cir. 1978) (explaining the National Contingency Plan, an oil spill fund created by Section 1321(k), which has since been replaced by the Oil Spill Liability Trust Fund) (citations and footnotes omitted) (§ 1321(b)(6) penalty, pre-OPA).

212. Polluter pays theory is not confined to the Clean Water Act, "The polluter pays principle is a normative doctrine of environmental law. Although its precise legal definition remains elusive, the core of this principle stems from the fundamental, logical, and fair proposition that those who generate pollution, not the government, should bear pollution costs."

Jonathan Remy Nash, *Too Much Market? Conflict Between Tradable Pollution Allowances and the "Polluter Pays" Principle*, 24 HARV. ENVTL. L. REV. 465, 466 (2000). *See also* Brianna E. Tibett, *Reinstating CERCLA as the "Polluter Pays" Statute with the Circuit Court's Mutually Exclusive Approach*, GEO. ENVTL. L. REV. ONLINE 1, 4 (2017) (explaining that CERCLA was intended to "place the cost of the response on the responsible parties, the 'polluters.'"); Eric Thomas Larson, *Why Environmental Liability Regimes in the United States, the European Community, and Japan Have Grown Synonymous with the Polluter Pays Principle*, 38 VAND. J. TRANSNAT'L L. 541, 547 (2005).

the owner of the *Deepwater Horizon* rig; BPXP ("BP"),[213] the principle leaseholder; and BP's co-lessees, MOEX Offshore and Anadarko. Between court rulings and settlements, this entire polluting enterprise was held responsible for the *Deepwater* spill. BP was liable as a "person in charge" of the rig, and BP and Anadarko were both liable as owners of the Macondo well.[214] Co-lessee MOEX and operator Transocean both settled civil CWA claims shortly before trial for $90 million[215] and $1 billion,[216] respectively. In 2015, BPXP settled its civil CWA and OPA liability with the United States and five Gulf States for $20.8 billion.[217] The court assessed a $159 million civil penalty against Anadarko shortly after BP settled.[218]

Legislative history of the 1990 amendments to Section 311 establishes Congress' intent to hold multiple parties liable for a single spill. Senator Lieberman, who drafted significant portions of OPA and CWA Section 311, explained that:

> the 'polluter' must be defined to *include all parties related to the spilled oil* – the person or company which arranged for the transport of the oil, the transporter of the oil, those who own an Interest in the oil, the owner of the vessel and the operator of the vessel. And all these entities must be strictly and jointly and severally liable.[219]

With this understanding, limiting liability to one party may defeat the purpose of the Act,[220] arbitrarily limit its scope,[221] and undermine its text.[222] Congress

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213. Deepwater Liability Ruling, 21 F. Supp. 3d 657, 669 (E.D. La. 2014).

214. See In re: Oil Spill by the Oil Rig "Deepwater Horizon" in the Gulf of Mexico, on April 20, 2010, 844 F.Supp.2d 746 (E.D. La 2012) (order and reasons as to the United States', Transocean's, and Anadarko's cross-motions for partial summary judgment regarding liability under the CWA and OPA) [hereinafter Deepwater Summary Judgment Order].

215. *See MOEX Offshore 2007 LLC Settlement*, ENVTL. PROT. AGENCY (Feb. 17, 2012), https://perma.cc/B46J-C8PX; Consent Decree Between the United States and MOEX Offshore 2007 LLC at 10, In re: Oil Spill by the Oil Rig "Deepwater Horizon" in the Gulf of Mexico, on April 20, 2010, 808 F. Supp.2d 943 (E.D. La. 2011) (10-4536), https://perma.cc/SZT4-SNSB.

216. *See Transocean Settlement*, ENVTL. PROT. AGENCY (Jan. 13, 2013), https://perma.cc/Z7QB-CJHT.

217. *See* Press Release, U.S. Dep't of Justice, U.S. and Five Gulf States Reach Historic Settlement with BP to Resolve Civil Lawsuit Over Deepwater Horizon Oil Spill (Oct. 5, 2015), https://perma.cc/W6FB-LKH4. At the time, this was "the largest settlement with a single entity in the department's history." *Id.*; *see also* Consent Decree Among Defendant BP Exploration & Production Inc. ("BPXP"), The United States of America, and the States of Alabama, Florida, Louisiana, Mississippi, Guilty Plea Agreement at and Texas at 18–31, In re: Oil Spill by the Oil Rig "Deepwater Horizon" in the Gulf of Mexico, on April 20, 2010, 808 F.Supp.2d 943 (E.D. La. 2011) (MDL No. 2179), https://perma.cc/9QN5-X8HK (last visited Mar 19, 2020).

218. Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 583 (E.D. La. 2015).

219. *Pending Oil Spill* Legislation, *Hearing before the Senate Subcomm. on Envtl. Prot. of the Comm. on Env't and Pub. Works*, 101st Cong. 272, 7 (1990) (Statement of Senator Lieberman) (emphasis added).

220. *Id.*, ESKRIDGE *ET AL.*, *supra* note 2, at 1212.

221. Sabine Towing & Transp. Co. v. United States, 666 F.2d 561, 565 (Ct. Cl. 1981).

222. *See, e.g.*, Conn. Nat'l Bank v. Germain, 503 U.S. 249, 253–54 (1992) ("[C]ourts must presume that a legislature says in a statute what it means and means in a statute what it says there.").

intended to shift the cost of oil pollution *entirely* to industry. Even if a court felt that the "owners, operators and persons in charge" element was ambiguous as to the number of possible parties, it should interpret the Act to best carry out its purpose[223] by imposing liability as broadly as possible.

Not only does the Act contemplate multiple defendants for a single spill, the Act's zero-spill policy requires the inclusion of "faultless" violators.[224] Indeed, "liability for a civil penalty is strict, arising irrespective of knowledge, intent, or fault,"[225] and Section 311 penalties are mandatory.[226] Therefore, Section 311 liability is not limited to individuals who actually discharged the oil.

Indeed, the Act provides no defenses to liability.[227] Courts have refused to use third party defenses for ostensibly "passive" defendants[228] because they are "engaged in the type of enterprise which will inevitably cause pollution and on which Congress has determined to shift the cost of pollution."[229] This makes sense: even though a third party may be responsible for the actual act of discharge, the Act seeks to punish anyone involved in the enterprise that created the opportunity for pollution.[230]

Anadarko's liability for the *Deepwater* spill is perhaps the most well-known example of a defendant that claimed passivity[231] as a defense to liability and substantial penalty. Anadarko owned a 25 percent non-operating interest in the

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223. Scalia & Garner, *supra* note 4, at 63 ("A textually permissible interpretation that furthers rather than obstructs the document's purpose should be favored.").

224. *See, e.g.*, Deepwater Summary Judgment Order, 844 F.Supp.2d 746, 761–62 (E.D. La. 2012) (finding non-operating co-leasee Anadarko liable as an owner of the Macondo well); United States v. General Motors Corp., 403 F. Supp. 1151, 1152 (D. Conn. 1975) (facility owners who were victims of discharge-causing vandalism); Coastal States Crude Gathering Co., 643 F.2d 1125, 1126 (5th Cir. 1981) (owners whose pipeline leaked after an unknown third-party vessel hit it).

225. Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 572 (E.D. La. 2015); *see also* Apex Oil Co., Inc. v. United States, 208 F. Supp. 2d 642, 654 (E.D. La. 2002) (quoting S. Rep. 101-94, at 11 (1989)); United States v. Bodenger, No. 03–272, 2003 WL 22228517, at *2 (E.D. La. Sept. 25, 2003).

226. 33 U.S.C. § 1321(b)(7)(A), (D) (violators "*shall* be subject to civil penalty"); *see* Deepwater Appeal, 753 F.3d 570, 575 (5th Cir. 2014); WQIS 2007, 522 F. Supp. 2d 220, 226 (D.D.C. 2007).

227. *See* 33 U.S.C. 1321(f); Coastal *States*, 643 F.2d at 1128; United States v. W. of Eng. Ship Owner's Mut. Prot. & Indem., 872 F.2d 1192, 1200 (5th Cir. 1989); United States v. Marathon Pipeline Co., 589 F.2d 1305, 1308 (7th Cir. 1978).

228. United States v. Tex-Tow, 589 F.2d 1310, 1314–15 (7th Cir. 1978) (finding "an owner or operator of a discharging facility is liable to a civil penalty under the [CWA], even where it exercised all due care and a third party's act or omission was the immediate case of the spill"); *Marathon Pipeline*, 589 F.2d at 1306 (same).

229. *Tex-Tow*, 589 F.2d at 1314–15 & n.11.

230. *Id.*; *see also* Deepwater Summary Judgment Order 844 F.Supp.2d 746, 761–62 (E.D. La. 2012); *Marathon Pipeline*, 589 F.2d at 1309; *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 578; *citing Dean Dairy 1*, 150 F.3d at 264; *Kelly v. United States EPA*, 203 F.3d 519, 522 (7th Cir. 2000); United States v. Egan Marine, 2011 WL 8144393, at *6 (N.D. Ill. Oct. 13, 2011); *WQIS 2007*, 522 F. Supp. 2d at 226.

231. Whether Anadarko was passive based on evidence excluded before trial is beyond the scope of this Article. *But see* Opposition to Motion In Limine of Defendant Anadarko Petroleum Corporation to Exclude all Evidence Regarding Anadarko's Culpability at 3–7, In re: Oil Spill by the Oil Rig "Deepwater Horizon" in the Gulf of Mexico, on April 20, 2010, Case 2:10-md-02179-CJB-SS, Dkt. 12462 at 3–7 (E.D. La., Mar. 6, 2014) (arguing Anadarko had access to drilling data, knew of

Macondo well lease.[232] The company argued that it had no role in day to day drilling activities and that it was simply a passive investor.[233] The court agreed that Anadarko was "not negligent with respect to the loss of well control, blowout, explosions, or oil spill."[234] However, unlike cases of unidentified or unaffiliated third parties causing a discharge, the *Deepwater* spill was caused by the grossly negligent acts of Anadarko's business partner and operating co-leasee, BPXP.[235] Even though the court had held that Anadarko was not negligent, the company was ultimately held liable and penalized because:

> Anadarko and BP were the ones directly engaged in the enterprise which caused the spill. They were the mineral lessees, they owned the well, and they stood to profit directly from the oil it produced. Thus, Congress intended that the cost of pollution would be borne by these parties.[236]

This is appropriate: as part of BP's polluting enterprise, Anadarko was strictly liable under the Act[237] and responsible for paying $159 million in civil penalties.[238]

Further, the idea that these defendants were "passive" is questionable, given the language and purpose of the Act. Generally speaking, defendants who can point to a third party or co-owner, operator or person in charge as the *sole* source of a spill have called themselves "passive" or "faultless" because they had no active role in discharge.[239] Looking at the Act's purpose, this argument fails because[240] a defendant who satisfies the definition of "owner, operator, or person in charge" creates the opportunity for pollution,[241] is therefore part of a "polluting enterprise," and thus deserves to be held liable.[242] As a result, in order to achieve zero-spills and shift the cost of pollution, the Act must individually deter even

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Macondo's well control issues and even encouraged BP to continue drilling without a safe margin) [hereinafter U.S. Opp. to Anadarko Limine].

232. *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 571–72.

233. *See id*. at 572 n.51.

234. *Id*. at 572.

235. *Id*.

236. Deepwater Summary Judgment Order, 844 F.Supp.2d 746, 759 (E.D. La. 2012).

237. *Id*. at 22–23.

238. Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 583 (E.D. La. 2015). Decreased from $3.5 billion statutory maximum based on culpability. *Id*.

239. *See, e.g*., United States v. Tex-Tow, Inc., 589 F.2d 1310, 1314, (7th Cir. 1978); *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 572 n.51; Egan Marine, 2011 WL 8144393, at *5 (N.D. Ill. Oct. 13, 2011); United States v. Marathon Pipeline Co., 589 F.2d 1305, 1309 (7th Cir. 1978).

240. The Act is not entirely blind to fault: it employs a per barrel maximum penalty based on the blameworthiness of a violator's conduct. See *supra* Part III, section III.A.; *infra* Part III, section III.B.

241. *Tex-Tow*, 589 F.2d at 1314 (finding faultless defendant liable because it was "engaged in the type of enterprise which will inevitably cause pollution.").

242. *See* Deepwater, Summary Judgment Order 844 F.Supp.2d 746, 759 (E.D. La. 2012) (citing *Tex-Tow*, 589 F.2d at 1314–15, n.11); Deepwater Appeal, 753 F.3d 570, 575 (5th Cir. 2014) (citing Kelly v. U.S. Envtl. Prot. Agency 203 F.3d 519, 522 (7th Cir. 2000); *Egan Marine*, 2011 WL 8144393 at *5; WQIS 2007, 522 F. Supp. 2d 220, 226 (D.D.C. 2007).

"passive" defendants.[243] The 1990 CWA amendments arose from a need to "generally deter," or deter the oil industry as whole, from oil pollution.[244] Therefore, general deterrence supports imposing liability on passive defendants[245] because it puts the entire oil industry on notice that defendants can be found liable under the Act for minor roles, and even in the absence of fault entirely.[246] This notice should, in turn, encourage the oil industry to remain actively engaged in managing risky operations, avoid partnering with businesses that are habitual violators, supervise contractors closely, maintain insurance sufficient to cover accidents caused by third parties, and invest in safety and maintenance programs.[247]

B. SMALL SPILLS TRIGGER LIABILITY

For most of the 1970s, the "quantity" element of Section 311 required two things: proof of harm and a visible oil sheen. At that time, oil had to be discharged in "harmful quantities" to trigger liability.[248] Even though the regulation promulgated under this standard defined "harmful quantities" as enough oil to merely create a visible sheen (the "sheen rule"),[249] because of the statutory language some courts would not impose liability unless actual harm could be proven.[250] This disconnect limited the Act's scope and, in some cases, rendered the sheen rule useless.

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243. *Pending Oil Spill* Legislation, *Hearing before the Senate Subcomm. on Envtl. Prot. of the Comm. on Env't and Pub. Works*, 101st Cong. 272, 7 (1990) (Statement of Senator Lieberman) (emphasis added) ("the polluter must pay fully for the mess it created-for cleanup costs, natural resource damages and economic losses to individuals."); *see also Oil Spills in the Coastal Waters of Rhode Island, the Delaware River and the Houston Ship Channel: Hearing before the Senate Subcomm. on Envtl. Prot. of the Comm. on Env't and Pub. Works*, 101st Cong. 15 (1989) (Statement of Rep. Schneider) ("[o]ne of the best ways to induce the oil industry to operate more safely . . . is to make sure that they pay heavily when there is a spill."); 135 Cong. Rec. S9678 (daily ed. Aug, 3, 1989) (recognizing a "need to establish a clear and sufficient structure of penalties to effectively deter those who would discharge to waters of the United States."); *see also Oil Spill Liability and Compensation*, *Hearing Before the H. Subcomm. on Water Res. of the Comm. on Pub. Works & Transp.*, 101st Cong. 10,333 (1990) ("an industry-financed cleanup and compensation fund takes the burden off the back of the taxpayer").

244. 135 Cong. Rec. S9678 (daily ed. Aug, 3, 1989).OPA, 135 Cong. Rec. S9678 (Aug. 3, 1989), Congress recognized a "need to establish a clear and sufficient structure of penalties to effectively deter those who *would* discharge to waters of the United States."; 101 Cong. Rec. S1380 at 21726 (Aug. 2, 1990).

245. *Tex-Tow*, 589 F.2d at 1314–15 & n.11 (finding that oil pollution is "statistically foreseeable pollution" and therefore passive defendants should be penalized).

246. 135 Cong. Rec. S9678 (Aug. 3, 1989).

247. Weber & Crew, *supra* note 14, at 161–68.

248. 33 U.S.C. § 1321 (1988) (originally enacted as Act of October 18, 1972, Pub. L. No. 92-500, § 2, 86 Stat. 862). Section 1321(b)(3) originally stated "The discharge of oil . . . in *harmful quantities as determined by the President* under paragraph (4) of this subsection, is prohibited . . . " *Id.* (emphasis added).

249. Discharge of Oil, 40 C.F.R. Part 110, 52 Fed. Reg. at 10714, *supra* note 46.

250. *United States v. Chevron*, 583 F.2d 1357, 1363–64 (5th Cir. 1978) (finding that the sheen test provided a basis for liability *unless* the defendant could prove that its oil spill was not harmful under the circumstances) (emphasis added).

In 1978, Congress changed the quantity element of Section 311 to trigger liability when oil was discharged in "quantities which *may* be harmful."[251] This standard clarified that Congress intended that harm could be inferred[252] with the sheen rule and authorized courts to find liability in cases of small spills.[253] This section argues that the 1978 amendment to Section 311 requires courts to interpret the "may cause harm" standard broadly. Taken together, clear statutory text, statutory and legislative history confirming its intent, the sheen rule and supportive precedents all demonstrate that courts should extend Section 311 liability to small spills whenever possible.

Based on the plain meaning of the text, the 1978 amendment expanded Section 311 liability to spills that might not have caused any harm. The word "may" is defined as "expressing possibility,"[254] and is "used to indicate possibility or prob ability."[255] "Possibly" is defined as "a likelihood that might or might not be true; perhaps,"[256] and "being something that may or may not occur."[257] Based on these definitions,[258] the phrase "quantities which may cause harm" can be read as quantities which might or might not cause harm.

The plain meaning of the "may be harmful standard" is consistent with the Act's precautionary, no-discharge approach to oil pollution. After all, Congress' policy is not that there be no *harmful* oil spills, but that there be *no discharges* of oil whatsoever.[259] This interpretation also supports a purposive construction[260] of

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251. 33 U.S.C. § 1321(b)(3) (Supp. V 1981), Pub. L. No. 95-576 § 1(b)(4), 92 Stat. 2467, 2468.

252. This change mirrors precautionary principles found in the Clean Air Act. *See* Leslie Carothers, *Upholding EPA Regulation of Greenhouse Gases: The Precautionary Principle Redux*, 41 ECOLOGY L.Q. 683, 683 (2014) ("the precautionary principle counsels that governmental action should be taken to reduce the risk of serious harms").

253. Apex Oil Co., v. United States, 530 F.2d 1291, 1293 (8th Cir. 1976) (citing United States v. Mobil Oil Corp., 464 F.2d 1124, 1127 (5th Cir. 1972)); United States v. Gen. Am. Transp. Corp., 367 F. Supp. 1284, 1288 (D. N.J. 1973) ("[the p]urpose of penalty provision of this section is to ensure, insofar as possible, that small discharges will not go undetected and that the possibility of effective abatement will not be lost."); *see also* Bruce H. Charnov, *The Oil Sheen Test: Can A Presumption of Harmfulness Still Be Rebutted After Orgulf Transportation Company v. United States?*, 21 ENVTL. L. 253, 261 (1991).

254. *May*, LEXICO POWERED BY OXFORD, https://perma.cc/ZZA3-FESG (last visited Sept. 28, 2020); *May*, CAMBRIDGE DICTIONARY, https://perma.cc/39SS-6YUZ ("used to express possibility") (last visited Mar. 19, 2020).

255. *May*, MERRIAM-WEBSTER, https://perma.cc/7SVV-2CNA (last visited Mar. 19, 2020).

256. *Possibly*, CAMBRIDGE DICTIONARY, https://perma.cc/L9GR-2GV6 (last visited Mar. 19, 2020); *Possibly*, LEXICO POWERED BY OXFORD, https://perma.cc/7JTX-WTRE (last visited Mar. 19, 2020).

257. *Possible*, MERRIAM-WEBSTER, https://perma.cc/E76F-H8GW (last visited Mar. 19, 2020); *see also Possibly*, MERRIAM-WEBSTER, https://perma.cc/JG57-DWDZ (last visited Mar. 19, 2020).

258. Scalia & Garner, *supra* note 4, at 101 ("General terms are to be given their general meaning"); Lawrence M. Solan, *The New Textualists' New Text*, 38 LOY. L.A. L. REV. 2027, 2055 n.161 (2005) ("[T]he biggest change in the search for word meaning in the past twenty years is the . . . attention courts now pay to dictionaries, including using them as authority for ordinary meaning").

259. 33 U.S.C. § 1321(b)(1) ("it is the policy of the United States that there should be *no discharges of oil* or hazardous substances into or upon the navigable waters of the United States.") (emphasis added).

260. ESKRIDGE *ET AL.*, *supra* note 2, at 1210; *cf.* Scalia & Garner, *supra* note 4, at 63.

the Act because Congress' zero-oil spill policy is focused on eliminating all spills and makes no mention of harm. Based on that,[261] courts should read the quantity element as blind to harm and use the sheen rule as its *only* requirement for quantifying discharges for liability.

The sheen rule was promulgated pursuant to the Act [262] and defines quantities which "may be harmful" as those that " cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines."[263] This regulation makes the "quantity" element of Section 311 liability broad and easy to satisfy because it is based on a subjective visual test[264] rather than an objective and difficult to administer[265] volume-based test.[266]

The sheen rule is not based on proof of actual environmental harm[267] but a presumptive inference of harm based on oil's toxicity. In public comments for the sheen rule, the oil industry argued that it was too stringent and demanded a volume-based quantity element.[268] EPA dismissed the argument, explaining that:

> Many types of adverse effects from oil have been extensively documented, proving harmful effects from oil spills and chronic pollution. . . . Evidence from reviews of laboratory studies further demonstrates that very small amounts of oil, *e.g.*, less than 1 mg/L (1 ppm), can have lethal and sublethal effects on a wide variety of organisms. . . .[269]

The sheen rule has enjoyed broad support from courts because it is based on "considerable investigation and research" on EPA's part.[270] The sheen rule's low hurdle for CWA liability also reflects a long standing belief that "[o]il is oil and whether useable or not by industrial standards it has the same deleterious effect

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261. Scalia & Garner, *supra* note 4, at 180 ("The provisions of a text should be interpreted in a way that renders them compatible, not contradictory."); *see, e.g.*, Lindh v. Murphy, 521 U.S. 320, 336 (1997) (favoring reading that "accords more coherence" to the disputed statutory provisions).

262. 33 U.S.C. § 1321(b)(4) (President defines may be harmful); Delegating Functions to the President Under the CWA, as Amended, 35 FR 11677, *superseded by* Implementation of Section 311 of the Federal Water Pollution Control Act of October 18, 1972, as Amended, and the Oil Pollution Act of 1990, 56 FR 54757 (giving the EPA authority to promulgate regulations implementing Section 311 of the Clean Water Act).

263. 40 C.F.R. § 110.3(b) (1996); *see also Overview of the Discharge of Oil Regulation ("Sheen Rule")*, ENVTL. PROT. AGENCY, https://perma.cc/42G7-63KQ (last visited Feb. 8, 2020).

264. Howard Latin, *Ideal Versus Real Regulatory Efficiency: Implementation of Uniform Standards and "Fine-Tuning" Regulatory Reforms*, 37 STAN. L. REV. 1267, 1313 n.222 (1985); Charnov, *supra* note 253, at 1.

265. United States v. Boyd, 491 F.2d 1163, 1168 (9th Cir. 1973) ("A numerical test creates not only the inherent difficulty of accurate observation as to the quantity discharged, it also may spawn an incentive to be inaccurate so as to avoid the obligation of reporting").

266. Charnov, *supra* note 253, at 258.

267. Orgulf Transp. Co. v. United States, 711 F. Supp. 344, 349 (W.D. Ky. 1989). Chevron, U.S.A., Inc. v. Yost, 919 F.2d 27, 30 (5th Cir. 1990).

268. Discharge of Oil, 40 C.F.R. Part 110, 52 Fed. Reg. at 10716, *supra* note 46.

269. *Id.*

270. *Chevron*, 919 F.2d at 30; *Orgulf Transp.*, 711 F. Supp. at 349; *Boyd*, 491 F.2d at 1169.

on waterways. In either case, its presence in our rivers and harbors is both a menace to navigation and a pollutant."[271] Taken together, the text of Section 311's "may cause harm" discharge element and the sheen rule provide an extremely low bar for triggering liability. In essence, it made Section 311 precautionary.

The history of the 1978 amendment also shows that Congress intended its "may be harmful" standard to lower the threshold for Section 311 liability. In part, the uneven treatment of the sheen rule by the courts prompted this change. Whereas some courts defended the sheen rule's reach,[272] others interpreted it in a way that deprived it of meaning. Earlier in 1978, the Fifth Circuit held in *United States v. Chevron* that *de minimis* spills were not covered by the Act.[273] In that case, the court found that the sheen rule provided a basis for liability *unless* the defendant could prove that its oil spill was not harmful under the circumstances.[274] As a result of this contradictory precedent, Congress clarified its intent that Section 311 liability be based on the sheen rule's visible sheen standard and not proof of actual harm. Explaining the 1978 amendment, Senator Stafford, a member of the Senate Committee on Environmental and Public Works, said:

> The proposal clarifies the authority of the administrator in designating hazardous pollutants and determining harmful quantities of such pollutants. The amendment makes it clear that the determination of harmful quantities *does not require an assessment of actual harm in the variety of circumstances in which such substances might be discharged*. Rather, the determination is based on the administrator's judgment of what quantity may be harmful *as a result of its chemical properties*, not the circumstances of its release.[275]

Based on Senator Stafford's statement, Congress did not want Section 311 liability to be predicated on proof of harm. This is in line with Section 311's aim to "*eliminate* oil pollution."[276]

Since the "may be harmful" amendment, courts have interpreted the sheen rule broadly by finding liability in the absence of evidence of actual harm. In *Orgulf Transport Co. v. United States*, the court explained that:

> Whether a spill resulted in actual harm to the environment is irrelevant to the determination of whether Section 311's prohibition of discharges of oil in

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271. United States v. Standard Oil Co., 384 U.S. 224, 226, (1966); *see also* United States v. Ashland Oil & Transp. Co., 504 F.2d 1317, 1329 (6th Cir. 1974).

272. *See, e.g.*, *Boyd*, 491 F.2d at 1169 (validating the sheen test and instructing that "[i]f you can see the spill, report it!"); Ward v. Coleman, 423 F. Supp 1352 (W.D. Okla. 1976), *rev'd*, 598 F.2d 1187 (10th Cir. 1979), *cert. granted sub nom*, United States v. Ward, 444 U.S. 934 (1979), *rev'd*, 448 U.S. 242 (1980); Apex Oil Co., v. United States, 530 F.2d 1291, 1292 (8th Cir. 1976) (finding purpose of CWA to protect against even small spills); United States v. Eureka Pipeline Co. 401 F. Supp. 934, 942-43 (N.D. W.Va. 1975) (finding that the sheen rule was not arbitrary and capricious).

273. *Chevron*, 583 F.2d at 1363–64.

274. *Id.*

275. 124 CONG. REC. 37,680–83 (1978) (statement of Sen. Stafford).

276. 33 U.S.C. § 1321(b)(1).

> quantities which may be harmful has been violated. The only pertinent inquiry is whether the spill was in a quantity which *may* be harmful as determined by the EPA.[277]

In that case, CWA liability and penalties were imposed for a five-gallon spill.[278] Similarly, in *Chevron U.S.C., Inc. v. Yost*, the Fifth Circuit found that Section 311's "may be harmful" element was satisfied even in the *absence* of harm.[279]

Section 311's "may be harmful" element is "the highest level of protection for the aquatic environment and signals to all who deal with water resources that no level of oil pollution will be tolerated."[280] It allows courts to impose liability in support of the CWA's zero-spill policy because it recognizes the dangerous impact of small spills[281] and punishes those who cause them.[282] The "may be harmful" standard is a particularly effective tool in promoting general deterrence because it puts industry on notice that a spill of any amount could result in liability.[283] Because courts should assume that Congress intends any statutory "amendment to have real and substantial effect,"[284] small spills that seem to cause no actual harm should trigger liability under the Act.

Section 311's liability standard invites broad interpretation. Not only can courts hold entire enterprises liable, but they need not find intent or even fault to establish liability. The punitive nature of this strict liability scheme is intentional: Congress wanted those involved in polluting enterprises to bear the cost of their business. The Act provides a similarly low bar for defining liability triggering discharge based on potential harm.[285] Courts can and should deter future spills and punish violators by imposing liability whenever the text allows it. As Part IV discusses, Section 311's penalty scheme should also be construed broadly and invites high penalties for violations arising from inherently risky activities.

IV. SECTION 311: PUNISHMENT & DETERRENCE

"It was my intent in writing the penalty provisions, which have been substantially adopted. . ., in the event of a spill, the Government apply the penalty

277. Orgulf Transp. Co. v. United States, 711 F. Supp. 344, 347 (W.D. Ky. 1989).

278. *Id*. at 350.

279. Chevron, U.S.A., Inc. v. Yost, 919 F.2d at 30 (imposing CWA civil penalties even though small spills did not cause actual injury to environment).

280. Charnov, *supra* note 253, at 261.

281. Discharge of Oil, 40 C.F.R. Part 110, 52 Fed. Reg. at 10716, *supra* note 46.

282. 101 Cong. Rec. S1380 at 21724 (Aug. 2, 1990) (Conf. Rep.).

283. 2 WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW § 4.35 (West, 2nd ed. 1986).

284. Stone v. Immigr. Naturalization Serv., 514 U.S. 386, 397 (1995); *see also* ESKRIDGE ET AL., *supra* note 2, at 1198.

285. 33 U.S.C. § 1321(b)(8); *see also* Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 569 (E.D. La. 2015) (finding that "the Government need not quantify the harm to the environment, etc., in order for a discharge to be deemed serious, very serious, etc.").

provisions in a manner which will punish the violator and deter and prevent future violations."

Senator Joseph Lieberman, August 2, 1990[286]

Section 311 has a three-step penalty scheme that provides courts with ample opportunities to maximize the deterrent impact of the Act. Once a defendant is found liable under Section 311, courts categorize their spill-related conduct to assign a maximum per barrel penalty,[287] quantify the spill,[288] and calculate a total penalty amount using eight penalty factors.[289] When a spill results from ordinary negligence or faultless conduct defendants can pay up to $1,100 per barrel spilled.[290] However, when the spill-causing conduct is grossly negligent or the result of willful misconduct, a $4,300 maximum per barrel penalty is available.[291] The maximum per barrel penalty is multiplied by the total barrels spilled to identify the maximum allowable penalty under the Act.[292]

After the statutory maximum is known, courts use eight penalty factors to adjust that number[293] and calculate a total penalty amount. These factors include:

> [1] the seriousness of the violation or violations, [2] the economic benefit to the violator, if any, resulting from the violation, [3] the degree of culpability involved, [4] any other penalty for the same incident, [5] any history of prior violations, [6] the nature, extent, and degree of success of any efforts of the violator to minimize or mitigate the effects of the discharge, [7] the economic impact of the penalty on the violator, [8] and any other matters as justice may require.[294]

Taken together, these factors provide courts with a balanced method to calculate civil penalties: some emphasize evidence that tends to increase penalties, and

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286. 101 Cong. Rec. S1380 at 21724 (Aug. 2, 1990) (Conf. Rep.).

287. 33 U.S.C. § 1321(a)(7)(A), (D).

288. 33 U.S.C. § 1321(a)(7)(A).

289. 33 U.S.C. § 1321(b)(8).

290. The statutory amount is $1,000 per barrel. 33 U.S.C. § 1321(b)(7)(A). Federal regulations increased this to $1,100. 40 C.F.R. § 19.4; 33 C.F.R. § 27.3.

291. The statutory maximum in the case of gross negligence or willful misconduct is $3,000. 33 U.S.C. § 1321(b)(7)(D). One federal regulation increased this amount to $4,000. A different regulation increased it to $4,300. 40 C.F.R. § 19.4; 33 C.F.R. § 27.3.

292. *See* 33 U.S.C. § 1321(a)(7)(A), (D), (b)(8).

293. Courts differ on where to start with penalty factor application. Some start at the statutory maximum and adjust down when the factors support that (top-down method). Others start using the "economic benefit" factor and adjust up using the other factors (bottom up method). *See, e.g.*, Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 579–80 (E.D. La. 2015). Discussion of this process is beyond the scope of this Article. *But see* OFFICE OF ENFORCEMENT & COMPLIANCE ASSURANCE, ENVTL. PROT. AGENCY, CIVIL PENALTY POLICY FOR SECTION 311(B)(3) AND SECTION 311(J) OF THE CLEAN WATER ACT (1998), https://perma.cc/8KPU-LCLK [hereinafter *EPA PENALTY POLICY*].

294. *See* 33 U.S.C. § 1319(d) (2020). CWA Section 309 includes many of the same penalty factors, including the seriousness of the violation, economic benefit, history of prior violations, economic impact, and other matters as justice may require. *Id.*

others tend to minimize them. This Part discusses some of the ways that the Act's penalty scheme should be used to maximize the deterrent impact of Section 311.

A. HEIGHTENING PER BARREL PENALTIES

The *Deepwater* case enables courts to assess a higher per barrel penalty in a wide range of circumstances. This is appropriate: "Clean Water Act penalties are punitive in nature and serve a deterrent purpose."[295]

Courts identify a per barrel penalty with a two-step process: define a defendant's duty of care, and determine the extent to which that duty was breached.[296] The extent of breach categorizes a defendant's behavior as faultless, negligent, grossly negligent, or the result of willful misconduct.[297]

This section defends and advocates continued use of the *Deepwater* court's tests for higher per barrel penalties. First, the *Deepwater* court outlined a persuasive argument that automatically elevates the applicable duty of care in deepwater drilling cases. Second, *Deepwater* rightly concludes that no proof of intent is required to establish gross negligence or willful misconduct. Finally, the *Deepwater* court used a compounding impacts test to assess higher per barrel penalties based on a series of multiple careless acts. All of these tests expand the applicability of higher per barrel penalties and support the Act's zero-spill policy.

1. Deepwater Drilling Elevates the Standard of Care

When the court defined the duty of care owed in *Deepwater*, it used a traditional foreseeability analysis but came to a ground-breaking conclusion: the inherently risky nature of deepwater drilling automatically elevates the duty of care.[298] This section examines the court's analysis and defends this conclusion.

The first step in assigning defendants a per-barrel penalty is to define the duty of care they owe. Duty of care is based on negligence, which is defined as a "failure to exercise the degree of care that someone of ordinary prudence would have exercised in the *same circumstances*."[299] Simply, if a reasonable person in your circumstances would have been more careful, you are negligent. A court must therefore define what negligence is *based on the facts of each case* before it can tell how blameworthy a defendant's conduct may have been.[300]

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295. RESTORE ACT, S. Rep. No. 112-100 at 14 (2011).

296. 33 U.S.C. §§ 1321(a)(7)(A), (D).

297. §§ 1321(a)(7)(A), (D); *see generally Deepwater Liability Ruling*, 21 F. Supp. 3d 657, 738 (E.D. La. 2014).

298. *Deepwater Liability Ruling*, 21 F. Supp. 3d at 738, n.191.

299. *Id.*, *see also* Water Quality Ins. Syndicate v. United States, 632 F. Supp. 2d 108, 112 (D. Mass. 2009) [hereinafter WQIS 2009] ("a failure to exercise the degree of care, which a person of ordinary caution and prudence would exercise under the circumstances . . . ") (OPA cost recovery claim); United States v. Ortiz, 427 F.3d 1278, 1283 (10th Cir. 2005) (CWA Section 301 case).

300. If the relevant duty is not breached, the lower per barrel penalty applies. *See* 33 U.S.C. § 1321(a)(7)(A), (D).

Risky situations raise the duty of care because it changes what a reasonable person would do in the same circumstance.[301] The *Deepwater* court recognized that actions that meet the standard of care under one set of facts may be deemed negligent or even grossly negligent under riskier circumstances.[302] To define BP and Transocean's duty of care, the *Deepwater* court quantified the risk involved in drilling the Macondo well, asked if the harm resulting from the blowout and spill was foreseeable, and identified how easily the risk could have been mitigated.[303] These three steps reflect a common sense approach to defining duty and establishing breach: the risk and foreseeability of harm defines what a reasonable person would do in the same circumstance, and the burden of mitigation illustrates the severity of the breach. In other words, you can prove negligence when the risk of foreseeable harm and burden for preventing it are similar, and you can prove gross negligence or willful misconduct when the risk of foreseeable harm is high and the burden to prevent it is low.[304]

The *Deepwater* court considered a variety of facts to establish the magnitude of risk involved in drilling the Macondo well, including geological data about the MC252 formation,[305] well depth and downhole conditions,[306] Macondo's history of well control[307] and lost return incidents,[308] drilling

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301. *WQIS 2009*, 632 F. Supp. 2d at 112 ("A greater degree of care is required when the circumstances present a greater apparent risk."); *see also Deepwater Liability Ruling*, 21 F.Supp.3d at 738 (same); W. PAGE KEETON, DAN B. DOBBS, ROBERT E. KEETON & DAVID C. OWEN, PROSSER AND KEATON ON THE LAW OF TORTS § 34, at 208–09 (5th ed. 1989) ("[A]s the danger becomes greater, the actor is required to exercise caution commensurate with it.") [hereinafter PROSSER ON TORTS].

302. *Deepwater Liability Ruling*, 21 F.Supp.3d at 738, (citing *WQIS 2009*, 632 F.Supp.2d at 112 ("Negligence is 'gross' when there is an extreme departure from the care required under the circumstances or a failure to exercise even slight care.") (citation omitted)); *see also* Tracy v. Wood, 24 F. Cas. 117, 118–19 (C.C.D. R.I. 1822) (No. 14,130).

303. *Deepwater Liability Ruling*, 21 F.Supp.3d at 738, n.191.

304. RESTATEMENT (THIRD) OF TORTS § 2 cmt. d (AM. LAW INST. 2010) (explaining that "when . . . the imbalance between the magnitude of the foreseeable risk and the burden of precaution becomes sufficiently large, that imbalance indicates that the actor's conduct is substantially worse than ordinary negligence."); *see also* Keating v. Shell Chem. Co., 610 F.2d 328, 332 (5th Cir. 1980) (citing William L. Prosser, LAW OF TORTS at 32 (4th ed. 1971).

305. *Deepwater Liability Ruling* 21 F.Supp.3d at 673. The court acknowledged that "[m]any of the problems at Macondo stemmed from the fact that the well encountered increasingly fragile sandstone." *Id*. at 673. The court also cited admissions by then BP C.E.O. and former geologist Tony Hayward, who "described deepwater mineral exploration as 'akin to outer . . . space exploration.' Dr. Hayward estimated that BP was drilling roughly 20 deepwater wells around the world on April 20, 2010 [and] estimated that, at most, 5 of these wells were considered 'higher risk' due to the nature of their geologic formation." *Id*. at n.194. BP classified Macondo as one of these 5 'higher risk' deepwater wells." *Id*., Dep. of Anthony Hayward, June 6, 2011, 872:8–11, 873:6; 875:1–19. https://webarchive.library.unt.edu/deepwaterhorizontrial/20170714172642/http://www.mdl2179trialdocs.com/index.php?page=details&release_id=201302281700004.

306. *Deepwater Liability Ruling*, 21 F.Supp.3d at 738 (explaining that "[t]he high pressure and high temperature characteristics" of the formation increased risk and "in turn, further raises the standard of care.").

307. *Id*. at 673. (explaining that the Macondo well experienced kicks on October 26, 2009 and March 8, 2010).

308. *Deepwater Liability Ruling*, 21 F.Supp.3d at 673 (noting that the well also experienced multiple lost returns).

practices,[309] and even the work environment on the rig.[310] All of these factors led the court to find that drilling the well was extremely risky.[311]

The court established foreseeability in two ways. First, the court pointed to facts showing that BP was aware of the risk that existed with Macondo in particular.[312] By outlining BP's involvement in cement design and testing,[313] drilling management[314] and cost cutting,[315] it is indisputable that BP knew or should have known that Macondo was a particularly risky well.

Interestingly, the court also established foreseeability based on the dangerous nature of deepwater drilling. Relying in part on applicable safety regulations referencing risk,[316] the court found that, as a member of the oil industry, "BP recognized that a blowout, explosion, and oil spill are potential harms associated with offshore drilling. Obviously, the magnitude of this potential harm is great in terms of severity, which in turn raises the standard of care."[317] This is basically a notice argument. Because BP was required to comply with safety regulations that imply drilling is dangerous, it was on notice that drilling the Macondo well was risky.

This is a potentially profound precedent. The court not only implies that deepwater drilling is dangerous and the industry at large knows that, but also that, as a result of this risk, deepwater drilling *automatically triggers a higher duty of care*.[318] If, as *Deepwater* court implies, the risk of deepwater drilling is always high, then certain types of harm are always foreseeable.

Many facts support the *Deepwater* court's conclusion that deepwater drilling is inherently risky.[319] For example, fatality rates among oil and gas workers are seven times higher than U.S. workers in general.[320] Deepwater drilling is also

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309. *Id*. at 674. (quoting "BP's Geological Operations Coordinator, who stated, 'Drilling ahead any further would unnecessarily jeopardize the wellbore. . . . At this point it became a well integrity and safety issue.'") *Id*. at 675.

310. *Id*. at 673 "Drilling the Macondo well did not go smoothly. Some called it the 'well from hell.'" (citations omitted).

311. *Id*. at 738, n. 195 citing *Houston Exploration Co. v. Halliburton Energy Servs., Inc*., 269 F.3d 528, 532–33 (5th Cir. 2001) (recognizing that not every "decision relating to a deepwater well is of a nature that any unreasonable act or decision is automatically treated as an extreme departure from the standard of care.").

312. *See, e.g*., *Deepwater Liability Ruling*, 21 F.Supp.3d at 740.

313. *Id*. at 693

314. *Id*. at 673. (finding that BP knew its decision to drill another 100 feet might cause well control problems.)

315. *Id*. 677.

316. *Id*. n.193, citing 30 C.F.R. §§ 250.107(a), 107(c), 401, 3000.

317. *Id*. at 673; *see also id*. at 740 (explaining that "a negative pressure test conducted as part of a temporary abandonment of a deepwater well already demands a high level of care").

318. *Id*. at 738, n.191.

319. *See infra* Part IV, section IV.B.1 for discussion of oil's impact on the environment, human health harm and the economy. See *supra* Part I, section I.A for discussion of how the spill size impacts outcomes.

320. Mason et. al., *supra* note 58, at 551 (noting that 1,189 oil workers died between 2003 and 2013, the majority of which were offshore workers); *see also* BUREAU OF SAFETY & ENVTL. ENFORCEMENT,

wildly difficult[321] and industry-wide trends increasingly compound these challenges.[322] Though the frequency of deepwater spills is low compared to other types of oil spills (for example, spills from vessels), they are disproportionately severe.[323] Finally, as discussed in detail in Part I, section a, and Part IV, section b(i), drilling also poses significant risks to the environment and economy.

The *Deepwater* court found that when the foreseeable risks of common industry-wide activities trigger higher standards of care, the actual circumstances surrounding the drilling of a well can further increase a defendant's duty of care.[324] Bringing these two foreseeability standards together creates a multi-step risk test: first, courts can look at risks inherent to the drilling process; second, courts consider the context in which a specific well is being drilled.[325]

The *Deepwater* court established ease of mitigation by outlining a litany of unnecessary choices BP made to drill deeper, faster, and cheaper.[326] For example, BP failed to run a simple test to confirm whether the well's cement had set[327] and failed to rerun a quick but safety-critical negative pressure test before temporary abandonment after the first test's results indicated that the well was not secure.[328] Overall, the court found that a string of decisions that cut corners, skipped safety and quality checks, and prioritized profit over safety contributed to the

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supra note 14 (reporting approximately 2,800 injuries on rigs from 2007–2018). There were 489 oil and gas extraction workers killed on the job from 2013–2017. *Oil and Gas Extraction*, OCCUPATIONAL SAFETY AND HEALTH ADMIN., https://perma.cc/YGC7-GRP4 (last visited Mar. 19, 2020). There were 94 fatalities in 2018.*Fatal occupational injuries in private sector mining, quarrying, and oil and gas extraction industries*, U.S. BUREAU OF LAB. & STAT., https://perma.cc/7G7E-TJA8 (last visited Mar. 19, 2020). These figures are statistically much worse than other industries. Mason et. al., *supra* note 58, at 551.

321. *See, e.g.*, *Deepwater Liability Ruling*, 21 F. Supp. 3d at 672; Safina, *supra* note 7, at 4; *Plumbing the Depths*, THE ECONOMIST (Mar. 6, 2010), https://perma.cc/7U6C-L93T; F. William M. Pinkston & Peter B. Flemings, *Overpressure at the Macondo Well and its Impact on the Deepwater Horizon Blowout*, 9 SCIENTIFIC REPORTS, May 7, 2019, at 1, https://perma.cc/EPW6-VP85.

322. Lucija Muehlenbachs, Mark A. Cohen & Todd Gerarden, *The Impact of Water Depth on Safety and Environmental Performance in Offshore Oil and Gas Production*, 55 ENERGY POL'Y 699, 700 (2013) (finding that "as drilling goes deeper—especially where oil companies operate with insufficient oversight and relative impunity . . . —the risks to regional coasts, marine life, fisheries, reefs, and poor peoples increases"); Safina, *supra* note 7, at 4–5. *See also* Cordes, *supra* note 30, at 13; Remy Melina, *Why Is Offshore Drilling So Dangerous?*, LIVE SCIENCE (May 28, 2010), https://perma.cc/SH9X-66PY; Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 566 (E.D. La. 2015); Joe Nocera, *Moratorium Won't Reduce Drilling Risks*, N.Y. TIMES: TALKING BUSINESS (June 25, 2010), https://perma.cc/9XVM-9L7X.

323. Eckle et. al., *supra* note 34, at 13004. There were 1,213 spills meeting these criteria, totaling about 9.8 million tons discharged. Of these, spills from exploration and production rigs accounted for only 24 of 1,213 incidents (~2%) but discharged more than 2.2 million tons of oil (~22%). *Id.*

324. *Deepwater Liability Ruling*, 21 F.Supp.3d at 673.

325. *See Deepwater Liability Ruling*, 21 F.Supp.3d at 740.

326. *Id.* at 740–41.

327. *Id.* at 691.

328. *Id.* at 741.

blowout.[329] In most cases, these lapses could have been remedied by a little more attention, time, or money.

In essence, the *Deepwater* court laid the foundation to raise the standard of care for all future cases under Section 311 and lowered the standards for finding negligence, gross negligence, or willful misconduct. As a result, moving forward it will be easier to subject "owners, operators, and persons in charge" of deepwater drilling operations to higher per barrel penalties. When given the opportunity, courts should elevate the duty of care so that, in cases of negligence, gross negligence, and willful misconduct, defendants can be penalized to the maximum extent possible under the Act.

2. Proof of Intent is Not Required

Courts have substantial power to deter and punish highly culpable defendants based on how they define gross negligence and willful misconduct. The *Deepwater* court expanded the deterrent impact of the Act by declining to add an intent element to either term and finding that multiple careless acts could constitute gross negligence or willful misconduct. This section defends the *Deepwater* court's definitions of both terms and advocates the use of these definitions moving forward.

Gross negligence is not defined by the Act.[330] Although it is true that gross negligence is "a nebulous term that is defined in a multitude of ways, depending on the legal context and the jurisdiction,"[331] in the context of the CWA it should have a uniform meaning based on federal law.[332] According to the *Deepwater* court, "gross negligence is an extreme departure from the care required under the circumstances or a failure to exercise even slight care."[333] Based on this definition, negligence and gross negligence are on the same sliding scale—gross negligence is just a greater degree of negligence.[334] Therefore, gross negligence needs no proof of intent. This approach to gross negligence is supported by the Act's history, legislative history, text and purpose.

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329. *See, e.g.*, *Id.* at 695, 710.

330. *Id.* at 733.

331. *Id.* at 735 (citing 57A AM. JUR. *Negligence* § 274, Westlaw (database updated Aug. 2020)).

332. *See* Lone Star Chapter v. Cedar Point Oil Co., 73 F.3d 546, 565–68 (5th Cir. 1996) (interpreting the meaning of "pollutant" under the CWA based exclusively on federal law); *see also* Resolution Trust Corp. v. Diamond, 45 F.3d 665, 671–72 (2d Cir. 1995).

333. *Deepwater Liability Ruling*, 21 F. Supp. 3d at 732 (articulating the United States' proposed definition of gross negligence); *id.* at 738 (adopting the United States' definition).

334. *See, e.g.*, Saba v. Compagnie Nationale Air Fr., 78 F.3d 664, 667-69 (D.C. Cir. 1995); RESTATEMENT (SECOND) OF TORTS § 500 (AM. LAW INST. 1965) ("The difference between reckless misconduct and [negligent] conduct . . . is a difference in the degree of the risk.").

The plain meaning[335] of *gross* negligence also confirms that it is simply something greater than negligence. When used as an adjective, gross means "especially of wrong doing, very obvious and unacceptable; blatant,"[336] "glaringly noticeable usually because of inexcusable badness or objectionableness"[337] and "esp[ecially] something bad or wrong extreme or obvious."[338] Because none of these definitions mention willfulness or intent, "gross" should be given its broadest general meaning.[339]

As the *Deepwater* court recognized, the CWA's text contemplates separate bases for imposing higher per barrel penalties because the relevant clause is disjunctive: higher penalties are warranted in cases of gross negligence *or* willful misconduct.[340] Reading intent into gross negligence also arbitrarily limits the Act's per barrel penalties by interpreting it a way that makes gross negligence synonymous with willful misconduct and, therefore, meaningless.[341] Indeed, such interpretation runs afoul of the rule against surplusage by making the meanings of "gross negligence" and "willful misconduct" the same.[342] Statutory interpretation compels courts to "give effect, if possible, to every clause and word of a statute"[343] without rendering any clause "superfluous, void, or insignificant."[344] If nothing else, the *Deepwater* court's definition is correct because "section 1321 as a whole [] should be construed liberally."[345]

Statutory history also tells us that gross negligence does not demand proof of intent in Section 311 cases. While "the pre-OPA version of the CWA used '*willful* negligence or willful misconduct' as the standard for enhanced civil penalties," the 1990 CWA amendments changed the standard to *gross* negligence or

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335. RESTATEMENT (SECOND) OF TORTS § 500 (AM. LAW INST. 1965). *See also* Conn. Nat'l Bank v. Germain, 503 U.S. 249, 253–54 (1992) ("[C]ourts must presume that a legislature says in a statute what it means and means in a statute what it says there.").

336. *Gross*, LEXICO POWERED BY OXFORD, https://perma.cc/T9DV-SGXY (last visited Mar. 19, 2020).

337. *Gross*, MERRIAM-WEBSTER, https://perma.cc/C4KD-Y34B (last visited Mar. 19, 2020).

338. *Gross*, CAMBRIDGE DICTIONARY, https://perma.cc/7FLE-C5XD (last visited Mar. 19, 2020).

339. Scalia & Garner, *supra* note 4, at 101; *see also* Sabine Towing & Transp. Co. v. United States, 666 F.2d 561, 563 (Ct. Cl. 1981); Dep't of Hous. & Urban Dev. v. Rucker, 535 U.S. 125, 131 (2002) (giving unqualified statutory term broad meaning).

340. *Deepwater Liability Ruling*, 21 F. Supp. 3d 657, 733 (E.D. La. 2014) (the Court notes that the phrase "gross negligence or willful misconduct" is disjunctive, which suggests that these terms have distinct meanings under the statute."); *see also* United States v. Woods, 571 U.S. 31, 45 (2013) ("the operative terms are connected by the conjunction 'or' . . . [That term's] ordinary use is almost always disjunctive.") (quoting Reiter v. Sonotone Corp., 442 U.S. 330, 339 (1979)); Scalia & Garner, *supra* note 4, at 116.

341. *Sabine Towing*, 666 F.2d at 565.

342. ESKRIDGE *ET AL.*, *supra* note 2, at 1197 (explaining the presumption against redundancy, which "avoid[s] interpreting a provision in a way that would render other provisions of the statute superfluous or unnecessary.").

343. TRW Inc. v. Andrews, 534 U.S. 19, 31 (2001) (quoting United States v. Menasche, 348 U.S. 528, 538–39 (1955)).

344. *Id.* (quoting Duncan v. Walker, 533 U.S. 167, 174 (2001)).

345. *Sabine Towing*, 666 F.2d at 565.

willful misconduct.[346] This change suggests gross negligence has a lower standard than willful negligence did. Legislative history supports this conclusion. A House report on OPA in 1990 explains that gross negligence "is considered by the courts to be an extreme departure from reasonable conduct. Willful misconduct requires proof of an element of conscious intent."[347] These sources confirm that gross negligence has no element of intent under the CWA.[348] As the *Deepwater* court found, based on the plain language of the statute, statutory and legislative history, gross negligence does not require proof of intent.[349]

The CWA also fails to define willful misconduct.[350] Even though the plain meaning of the term *willful* suggests an element of intent, that is not always the case. As the *Deepwater* court recognized, willful misconduct traditionally has a two-part test.[351] First courts must identify an intentional act or omission that resulted in harm.[352] Second, courts determine whether a defendant *knew* the act would likely result in injury (intentional harm) or had *reckless disregard* for possible harm (inference of harm).[353] The *Deepwater* court found that the *reckless disregard* standard does not require proof of intent.[354] This is supported by common law, the plain meaning of recklessness, relevant precedents, and the Act's purpose.

Reckless disregard does not hinge on the harm-causing act but whether a reasonable person should have known harm was likely.[355] For example, the *Deepwater*

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346. *Id*. at 736; (explaining that "[p]rior to OPA, the CWA's standard for increased maximum penalties was "*willful* negligence or willful misconduct." 33 U.S.C. § 1321(b)(6)(B) (1988) (emphasis added). OPA changed this to "*gross* negligence or willful misconduct." Pub.L. 101-380, § 4301(b) (D), 104 Stat. 484, 537 (1990) (emphasis added); *see also* H.R. Rep. No. 101-653, at 52 (1990) (Conf. Rep.), *reprinted in* 1990 U.S.C.C.A.N. 779, 832).

347. 135 CONG. REC. 27,986 (1989) (statement of Rep. Synar).

348. Water Quality Ins. Syndicate v. United States, 225 F.Supp.3d 41 (D.D.C. 2016) [hereinafter WQIS 2016]. WQIS 2016 is one of the only cases to directly address *Deepwater*'s definition of gross negligence. The case suggests that the *Deepwater* court's reliance on statutory history is misplaced because alternative explanations exist for the "willful negligence" to "gross negligence" amendment in 1990. *Id*. at 74. The WQIS 2016 court ultimately found that proof of gross negligence under OPA requires intent. *Id*. at 75. For the reasons discussed in this section, WQIS 2016's ruling is flawed.

349. Deepwater Liability Ruling, 21 F. Supp. 3d 657, 724 (E.D. La. 2014).

350. *Id*. at 733.

351. RESTATEMENT (SECOND) OF TORTS § 500 cmt. a (AM. LAW INST. 1965); *accord* 57A AM. JUR. *Negligence* § 274, Westlaw (database updated Aug. 2020); *see also Deepwater*, 21 F. Supp. 3d at 734.

352. *Deepwater Liability Ruling*, 21 F.Supp.3d at 734.

353. *Id*. at 734 (quoting Tug Ocean Prince v. United States 584 F.2d 1151, 1163 (2d Cir. 1978) ("an act, intentionally done, with knowledge that the performance will probably result in injury, or done in such a way as *to allow an inference of a reckless disregard* of the probable consequences") (emphasis added). Although this definition of willful misconduct was used by both the United States and BP in *Deepwater*, the parties disagreed over whether recklessness required proof of intent. *See* BP's Proposed Conclusions of Law ¶ 2740, Dkt. 10467 (emphasis omitted); United States' Proposed Conclusion of Law ¶ 10, Dkt. 10460-2.

354. *Id*. 21 F. Supp. 3d at 734.

355. RESTATEMENT (SECOND) OF TORTS § 500 cmt. f (AM. LAW INST. 1965); *see also* Kirtsaeng v. John Wiley & Sons, 568 U.S. 519, 538 (2013) ("when a statute covers an issue previously governed by the common law,' [courts] must presume that 'Congress intended to retain the substance of the common

court found that BP acted "'recklessly' with respect to the negative pressure test."[356] Although BP intended to read the test correctly and acted with intention when it decided not to rerun it, it did *not* intend the resulting blowout and spill. This approach is mirrored in common law, where an individual's conduct recklessly disregards another's safety if a reasonable person in the same circumstance *has reason to know* not only "that his conduct creates an unreasonable risk of physical harm to another, but also that such risk is substantially greater than that which is necessary to make his conduct negligent."[357]

The plain meaning of recklessness also uniformly[358] rejects intent. Referencing individuals, recklessness is defined[359] as those individuals who are "without thinking or caring about the consequences of an action,"[360] or are "careless of consequences."[361] Referencing actions, reckless is defined as "doing something dangerous and not worrying about the risks and the possible results"[362] or "not thinking about the possible bad effects of your actions."[363] Without exception, these definitions[364] support the Deepwater court's conclusion that recklessness—and therefore one type of willful misconduct—does not require proof of intent.[365]

The Supreme Court also rejected the idea that recklessness is intentional. [366] In *Exxon Shipping Co. v. Baker*, the Court explained that "[r]eckless conduct is not intentional or malicious, nor is it necessarily callous toward the risk of harming others, as opposed to unheedful of it."[367] Although common law does not control

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law.'" (quoting Samantar v. Yousuf, 560 U.S. 305, 320 n.13 (2010))); Evans v. United States, 504 U.S. 255, 259 (1992) ("[A] statutory term is generally presumed to have its common-law meaning." (quoting Taylor v. United States, 495 U.S. 575, 592 (1990)).

356. *Deepwater Liability Ruling*, 21 F.Supp.3d at 742.

357. RESTATEMENT (SECOND) OF TORTS § 500 cmt. a (AM. LAW INST. 1965).

358. ESKRIDGE *ET AL.*, *supra* note 2, at 1196; *see also* MCI Telecommunications Corp. v. AT&T Co., 512 U.S. 218, 224–26 (1994) ("Virtually every dictionary we are aware of says that 'to modify' means to change moderately or in minor fashion.").

359. Solan, *supra* note 258, at 2055 n.161.

360. *Reckless*, LEXICO POWERED BY OXFORD, https://perma.cc/4JBY-JVW2 (last visited Mar. 19, 2020).

361. *Reckless*, MERRIAM-WEBSTER, https://perma.cc/6YD3-XFQN (last visited Mar. 19, 2020).

362. *Reckless*, CAMBRIDGE DICTIONARY, https://perma.cc/2HNR-F45C (last visited Mar. 19, 2020).

363. *Reckless*, MACMILLAN DICTIONARY, https://perma.cc/2LMS-NJ7R (last visited Mar. 19, 2020).

364. In the absence of a technical or statutory definition, courts may give the word its ordinary meaning. ESKRIDGE *ET AL.*, *supra* note 2, at 1196; *see, e.g.*, Perrin v. United States, 444 U.S. 37, 42 (1979).

365. *See, e.g.*, Sabine Towing & Transp. Co. v. United States, 666 F.2d 561, 565 (Ct. Cl. 1981).

366. Kirtsaeng v. John Wiley & Sons, 568 U.S. 519, 538 (2013) ("when a statute covers an issue previously governed by the common law,' [courts] must presume that 'Congress intended to retain the substance of the common law.'" (quoting *Samantar v. Yousuf*, 560 U.S. 305, 320 n.13 (2010))); *see e.g.*, Evans v. United States, 504 U.S. 255, 259 (1992) (same) (quoting Taylor v. United States, 495 U.S. 575, 592 (1990)).

367. Exxon Shipping Co. v. Baker, 554 U.S. 471, 493 (2008) (citing RESTATEMENT (SECOND) OF TORTS § 500 cmt. a (AM. LAW INST. 1965)); *see also* Safeco Ins. Co. of Am. v. Burr, 551 U.S. 47, 57 (2007) (In the context of civil liability, "willfulness . . . cover[s] not only knowing violations of a standard, but reckless ones as well.").

the meaning of a federal statute, the Supreme Court's definition is instructive[368] and subsequent cases interpreting the CWA have used it.[369]

Above all, requiring proof of intent to establish gross negligence or willful misconduct is entirely contrary the Act's cost shifting goals.[370] If industry rather than the public is meant to pay for pollution, it cannot be the case that violators only pay elevated per barrel penalties when intentional acts result in a spill. Courts should not limit the imposition of higher per barrel penalties by reading a mental element into gross negligence or willful misconduct.

3. The Multiple Acts Test

Judge Barbier established gross negligence and willful misconduct two ways: based on a single act, and based on the compounding impact of multiple negligent acts.[371] The court found gross negligence and willful misconduct as a result of BP's failure to rerun a safety critical test in the face of evidence it had failed[372] The court also added up several negligent acts that contributed to the blowout and concluded that the sum of the acts "evince[d] an extreme deviation from the standard of care and a conscious disregard of known risks."[373] This section defends the *Deepwater Court's* multiple acts approach to gross negligence and willful misconduct, which is supported by the Act's purpose, common law, and applicable precedent.

Multiple negligent acts contributed to the *Deepwater* blowout and spill, including drilling without a safe drilling margin, failing to properly install safety equipment, refusing to perform a cement stability test, clogging the well with waste to avoid paying for its disposal, misinterpreting the safety critical negative pressure test, and allowing chaotic operations on the rig floor the day of the blowout.[374] None of these acts individually caused the blowout and spill. However, taken together, the court found that they were causal.[375]

The multiple acts test is a natural extension of *Deepwater*'s duty of care analysis. For every careless act, the foreseeability of a blowout increased and, with it,

368. *Kirtsaeng*, 568 U.S. at 538; *Evans*, 504 U.S. at 259; *see also* ESKRIDGE ET AL., *supra* note 2, at 1208 (presumption in favor of following common law usage); Scalia & Garner, *supra* note 4, at 320;

369. Tug Ocean Prince v. United States, 584 F.2d 1151, 1163–64 (2d Cir. 1978) (finding that even if defendant "did not have actual knowledge, it *should have recognized the probable consequences*, and that, therefore, the failure to act constituted a reckless disregard of those probable consequences.") (emphasis added).

370. *See, e.g.*, United States v. Tex-Tow, 589 F.2d 1310, 1313 (7th Cir. 1978); *Pending Oil Spill* Legislation, *Hearing before the S. Subcomm. on Envtl. Prot. of the Comm. on Env't and Pub. Works*, 101st Cong. 272, 7 (1990) (Statement of Senator Lieberman).

371. Deepwater Liability Ruling, 21 F. Supp. 3d 657, 742–44 (E.D. La. 2014).

372. *Id.* at 742–44.

373. *Id.*

374. *Id.* at 742–44. (citations omitted).

375. *Id.* at 742.

the defendants' duty of care.[376] In essence, these negligent acts functioned like blocks building to a blowout: the risk created by their cumulative impact made the spill foreseeable. On top of that, many of the acts could easily have been mitigated had BP been willing to spend more time, money, or energy on safety.[377] As the risk ratcheted up with each successive act, BP's failure to mitigate it became increasingly egregious.[378]

Courts have used this compounding effect approach in CWA and OPA cases.[379] For example, in *Tug Ocean Prince v. United States*,[380] a Section 311 liability limitation action arising from a vessel spill, the court found the defendant guilty of willful misconduct because it should have known that its failure to act on a number of occasions seriously risked a single harm.[381] The court explained that although the defendant's omissions may not establish willful misconduct in isolation, "*the combination of factors [] together indicate a probable consequence of damage* resulting from several failures to act, and [] continuing to fail to act in the face of that probability" constituted a reckless disregard.[382]

The Act's purpose would be frustrated if courts are not permitted to add up a defendant's careless acts to impose higher per barrel penalties.[383] Specifically, the multiple acts test gives courts a tool to severely punish habitually negligent violators. It also puts the offshore industry on notice that routinely negligent operations could trigger higher penalties in the case of a spill. Indeed, any other

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376. WQIS 2009, 632 F. Supp. 2d 108, 112 ("A greater degree of care is required when the circumstances present a greater apparent risk."); PROSSER ON TORTS, *supra* note 301, at 208–09 ("[A]s the danger becomes greater, the actor is required to exercise caution commensurate with it."); *see also Deepwater Liability Ruling*, 21 F.Supp.3d at 738 (same); Patrick H. Martin, *The BP Spill and the Meaning of "Gross Negligence or Willful Misconduct"*, 71 LA. L. REV. 957, 975 (2011) (same).

377. *See supra* Part III, section III.A.

378. RESTATEMENT (SECOND) OF TORTS § 500 (AM. LAW INST. 1965); RESTATEMENT (THIRD) OF TORTS § 500 cmt. d (AM. LAW INST. 2010).

379. *See* Tug Ocean Prince, Inc. v. United States, 584 F.2d 1151, 1163–64 (2d. Cir. 1978); *WQIS 2009*, 632 F. Supp. 2d at 111 (relying on case law interpreting "willful misconduct" under the CWA to interpret that phrase under OPA) Statutory context dictates that identical terms in OPA and CWA be interpreted in the same way. *See* 82 C.J.S. *Statutes* § 476, Westlaw (database updated Sept. 2020) (statutes relating to the same subject matter "generally should be read as together constituting one law and should be harmonized if possible"); United States v. Marshall, 908 F.2d 1312, 1316 (7th Cir. 1990); *see also* Brown v. Gardner, 513 U.S. 115, 118 (1994); United Sav. Ass'n of Tex. v. Timbers of Inwood Forest Assocs., 484 U.S. 365, 371 (1988).

380. 584 F.2d at 1163–64.

381. *Id*. at 1163 ("whether Red Star knew *such a combination of omissions would likely result in damage*; or whether, if Red Star did not have actual knowledge, it *should have recognized the probable consequences*, and that, therefore, the failure to act constituted a reckless disregard of those probable consequences.") (emphasis added).

382. *Id*. at 1163–64 (emphasis added); *see also* WQIS 2007, 522 F. Supp. 2d 220, 230 (D.D.C. 2007) (finding that an "accumulation of other acts" resulting in a spill "constitutes reckless disregard and willful misconduct.") (emphasis added).

383. Scalia & Garner, *supra* note 4, at 63; Sabine Towing & Transp. Co. v. United States, 666 F.2d 561, 565 (Ct. Cl. 1981).

interpretation would cause an absurd result:[384] It cannot be the case that defendants causing spills by a series of negligent acts can avoid higher per barrel penalties because courts cannot find one single act that constitutes gross negligence or willful misconduct. Because "[a] textually permissible interpretation that furthers rather than obstructs the document's purpose should be favored,"[385] The *Deepwater* court's multiple acts test should be widely adopted, and courts should employ a similar cumulative impact analysis whenever oil spills result from a series of careless acts.

The text of Section 311 and *Deepwater* provide courts with ample opportunities to assess higher per barrel penalties for culpable defendants. In furtherance of the Act's prohibition against oil pollution, courts should consider higher per barrel penalties regardless of intent and when spills are caused by a series of careless acts. Because of the known dangers inherent in the offshore industry, this is particularly true with spills arising from deepwater drilling.

B. MAXIMIZING PENALTIES

Section 311 penalties provide courts with flexibility to mold a penalty amount to the facts of a case.[386] Though all eight penalty factors must be considered,[387] a "district court's analysis of th[e] factors is highly discretionary."[388] That said, courts' application of each factor is still bound by the precepts of statutory interpretation,[389] and Congress intended that the factors be applied "in a manner which will punish the violator and deter and prevent future violations."[390] Courts are therefore required to apply each factor in furtherance of the Act's zero-spill policy.

There are two factors that can consistently be used to maximize the Act's deterrent impact: seriousness of the violation, and the degree of culpability

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384. *See Tug Ocean Prince*, 584 F.2d at 1164; *see also* VALERIE C. BRANNON, CONG. RESEARCH SERV., R45153, STATUTORY INTERPRETATION: THEORIES, TOOLS, AND TRENDS 46 (2018) ("If a court believes that the practical consequences of a particular interpretation would undermine the purposes of the statute, the court may reject that reading even if it is the one that seems most consistent with the statutory text"), https://perma.cc/2YKP-SL2T; *see, e.g.*, Clinton v. City of New York, 524 U.S. 417, 429 (1998) (finding that accepting a proposed legal interpretation "would produce an absurd and unjust result which Congress could not have intended" (quoting Griffin v. Oceanic Contractors, Inc., 458 U.S. 564, 574 (1982) (quoting Griffin v. Oceanic Contractors, Inc., 458 U.S. 564, 574 (1982)); Philadelphia v. Ridge Ave. Passenger R.R. Co., 102 Pa. 190, 196 (1883) ("[T]his purpose and object of the statute, [under the proposed construction,] would be defeated; the absurdity of such a construction is therefore apparent").

385. Scalia & Garner, *supra* note 4, at 63.

386. Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 581 (E.D. La. 2015) (citing United States v. Smith, No. 12–00498–KD–C, 2014 WL 3687223, at *12 (S.D. Ala. July 24, 2014)).

387. U.S. *ex rel.* Adm'r of Envtl. Prot. Agency v. CITGO Petroleum Corp., 723 F.3d 547, 551 (5th Cir. 2013) [hereinafter Citgo Appeal].

388. *Citgo Appeal*, 723 F.3d at 551; *see also* Tull v. United States, 481 U.S. 412, 427 (1987).

389. *See, e.g.*, Manning, *supra* note 2, at 108; *see generally* BRANNON, *supra* note 384.

390. 101 Cong. Rec. S1380 at 21724 (Aug. 2, 1990) (Conf. Rep.).

involved. This section demonstrates that the Act's text, history, and purpose compel courts to maximize penalties under these factors. Because factors like a defendant's efforts to mitigate the effects of a spill, or the economic impact of the penalty on the violator tend to lower civil penalties,[391] the most expansive interpretation of seriousness and culpability is necessary to support the Act's zero-spill policy.

1. Potential Harm Indicates Seriousness

Though the Act does not define seriousness, historically this factor introduces evidence pertaining to environmental, human health, and economic harms.[392] Despite its clear legislative purpose, there is a split in how courts apply the seriousness factor: some only consider the evidence of actual, quantifiable harm,[393] whereas others consider the risk of potential harm a spill creates.[394] Failing to consider evidence of potential harm takes the teeth out of the seriousness factor, and there are several ways courts do this: limited penalties to damages proven at trial,[395] reduced penalties for spills that could have been worse;[396] and rewarded defendants for nature's apparent "resilience" when the harm observed after a spill

391. Detailed discussion of the other penalty factors is beyond the scope of this Article. *But see Citgo Appeal*, 723 F.3d at 551; EPA PENALTY POLICY, *supra* note 293.

392. Evidence of actual human health harm historically includes evidence of fatalities and injuries from spills and clean-up activities. Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 565–66, n.3 (E.D. La. 2015). Previously admitted evidence of actual environmental harm includes the size and duration of discharge, *Citgo Appeal*, 723 F.3d at 553; United States v. Gulf Park Water Co., 14 F. Supp. 2d 854, 861–62 (S.D. Miss. 1998), ecosystem oiling, *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 570, death of wild and marine life, *id*., observed changes in marine populations, *id*., the toxicity of a discharge, United States v. Smith, No. 12–00498–KD–C, 2014 WL 3687223, at *12 (S.D. Ala. July 24, 2014), and the cost of cleanup, United States v. Egan Marine Corp., No. 08 C 3160, 2011 WL 8144393, at *2, 6–7 (N.D. Ill. Oct. 13, 2011). Due to the CWA's intolerance for a spill of any size, courts have considered spills ranging from 2–87 days and 4,817 gallons–4 million barrels "serious." *See* Tug Ocean Prince, Inc. v. United States, 584 F.2d 1151, 1163 (2d. Cir. 1978); United States v. Citgo Petroleum Corp., No. 08-893, 2011 WL 10723934, at *1–4 (W.D. La. Sept. 29, 2011) [hereinafter Citgo Judgment]; *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 566 n.3, 570; *Egan Marine*, 2011 WL 8144393 at *7. Evidence of actual economic harm has included business, waterway and fishery closures and disruptions, *Citgo Judgment*, 2011 WL 10723934 at *3, and disruptions in recreational activity, including beach and park closures. *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 569–70.

393. *See* United States v. Smithfield Foods, Inc., 972 F. Supp. 338, 343 (E.D. Va. 1997), *aff'd in relevant part*, 191 F.3d 416 (4th Cir. 1999).

394. *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 569 (finding that "the Government need not quantify the harm to the environment, etc., in order for a discharge to be deemed serious, very serious, etc.").

395. *Smithfield Foods*, 972 F. Supp. at 343 (concluding that a "substantial reduction on the maximum statutory penalty is warranted where the violations caused minimal environmental damage.").

396. Atl. States Legal Found. Inc. v. Universal Tool & Stamping Co., 786 F. Supp. 743, 747 (N.D. Ind. 1992) ("Notwithstanding the sheer number of violations by the defendant, the court finds there has been minimal environmental damage as a result of the violations").

seems to improve by the beginning of trial.[397] These approaches are antithetical to the Act's purpose.

However, some courts do consider "potential harm or a significant threat of harm"[398] in addition to actual harm. Courts have established potential harm to human health based on a variety of facts, including the size of response efforts,[399] victim compensation,[400] threats to water quality,[401] and fishery closures.[402] In the *Deepwater* case, evidence of potential harm to human health included studies about the post-traumatic stress caused by the spill and its harmful community wide impacts.[403] Evidence of potential environmental harm includes the presence of sensitive wildlife,[404] toxicity of the discharge,[405] size of the spill,[406] unexplained population changes,[407] threats to breeding,[408] and the long-term negative impacts of chemical exposure.[409] Some courts have even found discharges serious in the absence of actual harm because even small discharges of some pollutants are dangerous.[410]

This section examines why evidence of potential harm must be considered to support the Act's zero-spill policy.[411] First, the factor's text and statutory context clearly call for inclusion of potential harm evidence. Second, failing to consider

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397. *Citgo Judgment*, 2011 WL 10723934 at *1 ("testimony showed that the environmental impact was almost fully rectified by 2009, and the wildlife seems to be showing no adverse impacts from the spill").

398. *Deepwater Penalty Ruling*, 148 F. Supp. 3d at 569 (citing United States v. Gulf Park Water Co., 14 F. Supp. 2d 854, 860–62 (S.D. Miss. 1998).

399. United States v. Egan Marine Corp., No. 08 C 3160, 2011 WL 8144393, at *7 (N.D. Ill. Oct. 13, 2011).

400. *Id.*

401. Sierra Club v. El Paso Gold Mines, Inc., No. Civ.A.01 PC 2163 OES, 2003 WL 25265873, at *9 (D. Colo. Feb. 10, 2003).

402. *Gulf Park*, 14 F. Supp. 2d at 861–62.

403. *See* Expert Report prepared by Diane Austin, Sociocultural Effects of the Deepwater Horizon disaster in the Gulf of Mexico at 39–46, Deepwater Penalty Ruling, 148 F. Supp. 3d 563 (E.D. La. 2015) (No. 10–4536), https://perma.cc/KHL5-WU8V.

404. *Gulf Park Water*, 14 F. Supp. at 861.

405. *See* United States v. Smithfield Foods, Inc., 972 F. Supp. 338, 347–48 (E.D. Va. 1997), *aff'd in relevant part*, 191 F.3d 416 (4th Cir. 1999).

406. Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 570 (E.D. La. 2015).

407. *Id.*

408. *Id.*

409. *See* Expert Report prepared by Stanley Rice, Toxicological Impact of the MC252 Blowout, Oil Spill and Response at 23–29, Deepwater Penalty Ruling, 148 F. Supp. 3d 563 (E.D. La. 2015) (No. 10–4536), https://perma.cc/M2FF-9LBS.

410. United States v. Allegheny Ludlum Corp., 187 F. Supp 2d 426, 432 (observing that "metals discharged by ALC can be toxic in small concentrations of only parts per billion"); *see also* Incardona et. al., *supra* note 37.

411. *See* Lisa Heinzerling, *Environmental Law and the Present Future*, 87 GEO. L.J. 2025, 2026 (1999). Indeed, limiting seriousness evidence to the harm proven at a specific moment is antithetical to environmental law in general. *Id.*; *see also* Richard J. Lazarus, *Restoring What's Environmental About Environmental Law in the Supreme Court*, 47 UCLA L. Rev. 703, 746 (2000) ("temporal feature[s] of ecological injuries pose[] challenges to legal doctrine and lawmaking . . . ") (discussing the role of scientific uncertainty in recent Supreme Court decisions).

potential harm also allows violators to benefit from high stakes gambling in circumstances where spills could have been worse. Finally, penalties must also reflect the risks inherent in deepwater drilling to ensure that the cost of oil pollution truly shifts from the public to the oil industry.

Textual arguments also support the inclusion of potential harm evidence. For example, the plain meaning[412] of the word references levels: seriousness means the "the *degree* to which something is bad or dangerous,"[413] and something is "serious" if it is serious if it has "important or dangerous *possible* consequences."[414] These definitions favor the inclusion of evidence illustrating *all* the harms a spill might cause.[415]

Statutory context also supports an interpretation of the seriousness factor that emulates the Act's liability standard. Potential harm evidence asks what *might* happen, and that echoes the Act's "may be harmful" quantity element.[416] This reading of seriousness reflects the Act's strict liability standard and supports deterrence by holding defendants responsible for what might have happened had the spill been worse and for harms that may still occur after trial is over.

Moreover, inferring potential harm disincentivizes high stakes gambling within the oil industry because it prevents defendants from benefiting from smaller than expected impacts. Assessing how bad a spill could have been, as opposed to only how bad it actually was, eliminates the possibility of reduced penalties when factors outside of the defendant's control reduce the impact of a spill.[417] Facts from the *Deepwater* case illuminate this point. Early on in the 87-day spill, models predicted oil would devastate the Florida coast and may even enter the loop current.[418] Ultimately, unexpected changes in wind patterns and currents limited the spread of oil,[419] but BP was not entitled to benefit from this

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412. *See, e.g.*, Anita S. Krishnakumar, *Statutory Interpretation in the Roberts Court's First Era: An Empirical and Doctrinal Analysis*, 62 HASTINGS L.J. 221, 251 (2010) (noting that between January 31, 2006, and June 29, 2009, the majority of Supreme Court Justices "referenced text/plain meaning and Supreme Court precedent more frequently than any of the other interpretive tools"); *see also* ESKRIDGE ET AL., *supra* note 2, at 1196; Solan, *supra* note 258, at 2055 n.161.

413. *Serious*, MACMILLAN DICTIONARY, https://perma.cc/7RC4-ZU54 (last visited Mar. 19, 2020).

414. *Serious*, MERRIAM-WEBSTER, https://perma.cc/7RC4-ZU54 (last visited Mar. 19, 2020).

415. *See* Brannon, *supra* note 384, at 22–24 (emphasis added); *see also* Sabine Towing & Transp. Co. v. United States, 666 F.2d 561, 565 (Ct. Cl. 1981).

416. *See supra* Part II, section II.B.

417. In *Deepwater*, BP argued against seriousness by explaining that the Macondo spill was "far less serious than initially feared . . . as a result of the prompt response measures . . . the resiliency of the Gulf ecosystem, natural processes that break down oil, and related considerations." Deepwater Penalty Ruling, 148 F. Supp. 3d 563 (E.D. La. 2015) (findings of fact and conclusions of law), https://perma.cc/PC7D-RHY5. Such arguments should not discount penalty amounts.

418. *Wind Saved Florida, East Coast from Deepwater Horizon Oil Spill*, LIVE SCIENCE (July 11, 2012), https://perma.cc/N8KS-86NC.

419. Matthieu Le Hénaff, Vassiliki H. Kourafalou, Claire B. Paris, Judith Helgers, Zachary M. Ama// n, Patrick J. Hogan & Ashwanth Srinivasan, *Surface Evolution of the Deepwater Horizon Oil Spill Patch: Combined Effects of Circulation and Wind-Induced Drift*, 46 ENVTL. SCI. TECH. 7267, 7270–71 (2012), dx.doi.org/10.1021/es301570w; COMMISSION REPORT, *supra* note 31, at 174.

change in the weather.[420] This illustrates how the seriousness factor best serves the Act's zero-spill policy when defendants have to pay not only for the actual harm they caused, but also the harm that could have occurred but for post-discharge events. Indeed, other penalty factors take post-discharge events into account, but those events should not be used in a court's seriousness inquiry.

Finally, major inconsistencies in how courts apply the seriousness factor prevent them from carrying out the purpose of the Act. Even though courts have freedom in how to apply the penalty factors,[421] the Act's zero-spill policy dictates[422] that courts at least consider the full scope of harm caused by an oil spill. How such evidence impacts the ultimate size of a given penalty is left to a court's discretion and the balance of other penalty factors, but a failure to even hear evidence of potential harm certainly undermines the Act.[423]

2. Sometimes Passivity Should be Punished

Culpability is not defined by the Act, but this factor generally measures blameworthiness. Culpability evidence historically mirrors that used to assess per barrel penalties and includes all gradations of blameworthiness, from strict liability to willful misconduct.[424] Courts have previously considered evidence of failures to use safety critical equipment[425] or perform[426] and interpret safety critical tests,[427] dangerous drilling practices,[428] maintenance failures,[429] neglect of safety standards,[430] unsafe operations,[431] communication failures,[432] and decisions prioritizing profit over safety as culpability evidence.[433] Therefore, courts consider both actions and omissions relevant to a culpability inquiry.

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420. *See generally* Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 569 (E.D. La. 2015) (citing United States v. Gulf Park Water Co., 14 F. Supp. 2d 854, 860–62 (S.D. Miss. 1998)).

421. *Citgo Appeal*, 723 F.3d 547, 551 (5th Cir. 2013); *see also* Tull v. United States, 481 U.S. 412, 427 (1987).

422. Easterbrook, *Statutory Interpretation*, *supra* note 22, at 63–64.

423. Lazarus, *supra* note 411, at 743 (analysing how the Supreme Court views possible harm and scientific uncertainty in environmental cases generally).

424. *See Citgo Appeal*, 723 F.3d at 553 (negligence is a "higher degree of culpability than strict liability").

425. Deepwater Liability Ruling, 21 F. Supp. 3d at 743–44 (failing to verify whether the float collar converted).

426. *Id.* (failing to conduct a Cement Bond Log).

427. *Id.* at 743–44 (failing to properly interpret the negative pressure test).

428. *See, e.g.*, *id.* at 743–44 (drilling the last 100 feet with little or no drilling margin, using LCM as a spacer for the well displacement).

429. *Id.* at 722 (failing to change the BOP batteries or properly wire a safety-critical solenoid).

430. United States v. Egan Marine Corp., No. 08 C 3160, 2011 WL 8144393, at *4 (N.D. Ill. Oct. 13, 2011).

431. *Deepwater Liability Ruling*, 21 F. Supp. 3d at 743–44 (allowing simultaneous operations to occur during displacement).

432. *Id.* (failing to provide a displacement schedule to the Transocean drill crew).

433. *Id.* (finding that some decisions contributing to the spill were profit driven). Courts can consider prior bad acts and a defendant's history of violations to establish a pattern of culpable behavior.

To truly support the Act's zero-spill policy, courts must remember that the industry should pay in full for its pollution. There is also significant deterrent value in substantially penalizing passive defendants in some cases. For these reasons, this section argues that the culpability factor must not be significantly discounted when applied to "passive" defendants. This approach is supported by the Act's text, relevant precedent, statutory context and the Act's purpose.

Because the CWA is a strict liability statute, penalties are mandatory even in the absence of fault.[434] Indeed, the Act's liability standard makes *no distinction* between faultless violators and negligent ones: both are subject to the same $1,000 per barrel statutory maximum.[435] As explained in *Marathon Pipeline*, Congress made no allowances for nominal penalties.[436] This is appropriate and supported by statutory context:[437] Section 311 imposes liability for small spills,[438] has no defenses to liability or penalty,[439] and is intended to deter all oil pollution.[440] The Act as a whole supports substantial penalties in the absence of fault.[441]

Courts are split regarding how much the culpability factor should discount penalties for passive defendants. For example, in *Egan Marine* the court found that an 8,600 gallon spill was not caused by gross negligence but only discounted 10.3 percent from the statutory maximum for culpability.[442] Similarly, the defendant in *Marathon Pipeline* received little discount for a 19,992 gallon spill caused by a third party.[443] These cases rest on the cost shifting principle that "[i]t is reasonable to require those who 'caused' damage, *not by their conduct but by the activity they are engaged in*, to pay for the costs of abating that damage."[444] Indeed, the polluting enterprise theory should apply with equal force in liability and penalty assessment.

However, some courts only consider such evidence if a defendant was culpable for the violation at bar. Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 581 (E.D. La. 2015) ("if Anadarko was culpable for the incident, then its pollution history would be relevant to determining an appropriate punishment and deterrent").

434. 33 U.S.C. § 1321(b)(7)(A) (violators "*shall be* subject to a civil penalty . . . ").

435. 33 U.S.C. § 1321(b)(7)(A), (D).

436. United States v. Marathon Pipeline Co., 589 F.2d 1305, 1308 (7th Cir. 1978).

437. Scalia & Garner, *supra* note 4, at 63.

438. 33 U.S.C. § 1321(b)(3)–(4); 40 C.F.R. § 110.3(b).

439. 33 U.S.C. § 1321(b)(7)(A).

440. *See* 33 U.S.C. § 1321(b)(1); *see also*, 101 CONG. REC. S1380 at 21724 (Aug. 2, 1990) (Conf. Rep.).

441. *Marathon Pipeline*, 589 F.2d at 1308.

442. United States v. Egan Marine Corp., No. 08 C 3160, 2011 WL 8144393, at *3, *7–8 (N.D. Ill. Oct. 13, 2011).

443. *Marathon Pipeline*, 589 F.2d at 1308.

444. United States v. Tex-Tow, Inc., 589 F.2d 1310, 1313 (7th Cir. 1978) ("the civil penalty furthers the overall statutory scheme by shifting the cost of pollution onto the polluting enterprise."); *see also id.*, 589 F.2d at 1309 ("Congress has made a legislative determination that polluters rather than the public should bear the costs of water pollution"); *Deepwater Summary Judgment Order*, 844 F.Supp.2d at 761–62 (finding non-operating co-leasee Anadarko liable).

In the *Deepwater* case, well owner Anadarko's penalty was reduced from the maximum $3.5 billion ($1,100/barrel for a 3.19 million barrel spill) to $159 million ($50/barrel), almost entirely[445] because the court found that the company lacked culpability.[446] This is a 96 percent discount for the largest oil spill in U.S. history. In essence, the court defended its decision by explaining that passive defendants cannot be deterred and, because deterrence is the Act's primary goal and cost shifting is secondary, a substantial reduction was warranted. [447]

This approach is contrary to the plain meaning of culpability and improperly narrows the definition of deterrence to exclude non-operating violators. Based on its plain meaning, violators are culpable if they "deserv[e] blame,"[448] "merit condemnation,"[449] or are "considered responsible"[450] for a spill.[451] Based on these definitions, Anadarko was surely culpable as a non-operating partner and member of a polluting enterprise. Because Section 311 should be liberally construed,[452] the culpability factor should be governed by the broadest possible definition of the word.[453] This is particularly true in cases where spills are not caused by third parties, but partners over whom allegedly passive defendants may have exerted some control.

The *Deepwater* case suggests that deterrence is not served by penalizing passive defendants,[454] but that improperly narrows the Act's punitive reach. In some cases, passivity warrants blame. For example, in the years immediately preceding Anadarko's involvement in the Macondo well lease, BP's habitual violations of environmental and safety statutes resulted in a series of highly publicized events that put Anadarko on notice that BP was not safety conscious.[455] However,

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445. Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 566 (E.D. La. 2015).

446. *Id*. 571. Culpability was key to the Court's ruling even though evidence of Anadarko's culpability had been excluded from trial. *Id*. at 572.

447. *Id*. at 576–79.

448. *Culpable*, LEXICO POWERED BY OXFORD, https://perma.cc/A65W-X3N4 (last visited Mar. 19, 2020).

449. *Culpable*, MERRIAM-WEBSTER, https://perma.cc/9S66-VG6H (last visited Mar. 19, 2020).

450. *Culpable*, CAMBRIDGE DICTIONARY, https://perma.cc/6AUE-HNMT (last visited Mar. 19, 2020).

451. Scalia & Garner, *supra* note 4, at 101.

452. *See, e.g*., Sabine Towing & Transp. Co. v. United States, 666 F.2d 561, 565 (Ct. Cl. 1981); Dep't of Hous. & Urban Dev. v. Rucker, 535 U.S. 125, 131 (2002).

453. Scalia & Garner, *supra* note 4, at 63.

454. Deepwater Penalty Ruling, 148 F. Supp. 3d 563, 578 (E.D. La. 2015).

455. COMMISSION REPORT, *supra* note 31, at 16–17. For example, a 2005 explosion at BP's Texas City refinery killed fifteen people and injured 170. A year later a leak from a BP pipeline discharged approximately 200,000 gallons of oil in Alaska. *See* Press Release, U.S. Dep't of Justice, British Petroleum to Pay More Than $370 Million in Environmental Crimes, Fraud Cases: Charges Result from 2005 Texas Refinery Explosion, Alaska Pipeline Leaks and Attempt to Manipulate Markets (Oct. 5, 2007), https://perma.cc/MP7L-ZKYL; *see also* Guilty Plea Agreement at 2–5, United States v. BP Exploration & Production Inc., 21 F. Supp. 3d 657 (E.D. La. 2014) (Nos. 10–2771, 10–4536), https://perma.cc/U2RN-V29V; Joint Memorandum in Support of Proposed Guilty Plea by BP Exploration & Production Inc. at 7–9, United States v. BP Exploration & Production Inc., 21 F. Supp. 3d 657 (E.D. La. 2014) (Nos. 10–2771, 10–4536), https://perma.cc/U4U8-LPDD; Geoff Gibbs, *BP fined £1m for putting*

Anadarko has admitted that the company did no due diligence in examining BP's safety record before signing the lease.[456] Arguably, these facts increase Anadarko's culpability. If nothing else, the Act's deterrent function would be best served by severely penalizing "passive" violators who did nothing in the face of facts like these.

Courts are empowered to punish every member of a polluting enterprise,[457] regardless of fault, and the imposition of substantial penalties on those defendants sends a powerful message to the industry at large: prioritize safety, maintenance and compliance or pay the price. If nothing else, the imposition of high penalties on faultless violators would generally deter companies from working with habitual violators. In an industry with companies like BP, that is a laudable goal.

Aggressive application of the seriousness and culpability factors supports the Act's zero-spill policy. Further, it does not unfairly punish violators because the other six factors can be used to adjust penalties downwards in appropriate cases. Therefore, factors designed to credit defendants in appropriate circumstances will mitigate the impact of the seriousness and culpability factors.

CONCLUSION

Oil pollution is devastating. Regardless of spill size, oil's toxic nature negatively impacts everything it touches. Despite a growing body of science warning us of the insidious and long-ranging harm caused by oil, spills continue. As deepwater drilling increases without sufficient regulatory oversight, we face an ever-present risk of another *Deepwater*. The Clean Water Act provides courts with tools to combat this crisis head on. Congress intended to place the burden of pollution on the industry from which it came and—in the absence of other safeguards—courts must play the part of environmental steward and apply Section 311 to fully maximize the Act's deterrent and punitive effect.

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public and workers at risk, THE GUARDIAN (Jan. 18, 2002), https://perma.cc/6A6A-U3ZR; Press Release, Envtl. Prot. Agency, BP Exploration [Alaska] Pleads Guilty to Hazardous Substance Crime Will Pay $22 Million, Establish Nationwide Environmental Management System (Sept. 23, 1999), https://perma.cc/4W2F-3NZY.

456. *See* U.S. Opp. to Anadarko Limine, *supra* note 231, at 7 (citing deposition of Darrell Hollek, June 2, 2011, 134:17–22).

457. *See supra* Part II, section II.A for discussion of the polluting enterprise theory.